

ISSN 2226-0773

**HUMANITY SPACE  
INTERNATIONAL ALMANAC**

**ГУМАНИТАРНОЕ ПРОСТРАНСТВО  
МЕЖДУНАРОДНЫЙ АЛЬМАНАХ**

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2024

Volume 13, No 8 Том 13, № 8



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**Volume 13, No 8  
Том 13, № 8**

**БИОЛОГИЧЕСКИЕ НАУКИ / BIOLOGICAL SCIENCES**

**2024**



**Гуманитарное пространство. *Международный альманах* ТОМ 13, № 8, 2024**  
**Humanity space. *International almanac* VOLUME 13, No 8, 2024**

Главный редактор / Chief Editor: **М.А. Лазарев / M.A. Lazarev**

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**<http://www.humanityspace.ru>**

**<http://www.гуманитарноепространство.рф>**

Издательство / Publishers:

**Международная академия образования / International Academy of Education**

**121433, Россия, г. Москва, ул. Большая Филёвская, 28, корп. 2**

**Bolshaya Filevskaya str., 28, building 2, Moscow 121433 Russia**

Напечатано / Printed by:

**ООО «АЕГ Групп» / A.E.G. Group**

**125009, г. Москва, Тверская улица, 27, строение 1, подъезд 2**

**Tverskaya str., 27, building 1, approach 2, Moscow 125009 Russia**

**Постер-МГУ / Poster-MSU**

**119296, г. Москва, ул. Молодежная, 3**

**Molodezhnaya, 3, Moscow 119296 Russia**

Дата выпуска / Date of issue: **01.11.2024**

Реестр / Register: **ISSN 2226-0773**

DOI: **10.5281/zenodo.14026792**

EDN: **FEEUDZ**

Фото на обложке / Cover photo: *Agapanthia (Stichodera) soror* Kraatz, 1882: Kazakhstan, Karatau Mts., Berkara, 600 m, 7.6.1992. Photo by Mikhail Danilevsky.

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*Humanity space. International almanac*

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## **A complex of taxa around *Purpuricenius wachanrui* Levrat, 1858 (Coleoptera, Cerambycidae)**

**M.L. Danilevsky<sup>1</sup>, K. Hodek<sup>2</sup>**

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**Key words:** Coleoptera, Cerambycidae, Cerambycini, taxonomy, new rank, Iran, Azerbaijan, Turkey, Pakistan, Syria, Iraq, Cyprus.

**Abstract:** New rank is established for: *Purpuricenius wachanrui robusticollis* Pic, 1905, **stat. nov.** New synonyms are proposed: *P. wachanrui* Levrat, 1858 = *P. nanus* Semenov, 1907, **syn. nov.**; *P. w. robusticollis* Pic, 1905 = *P. persicus* Vartanis, 2023, **syn. nov.** *P. zarudnianus* Semenov, 1903 is confirmed as a species.

## **Introduction**

*Purpuricenius wachanrui* Levrat, 1858 is extremely variable in many known populations (especially in Iran): body bigger or smaller, antennae can be longer or shorter, with 11 or 12 segments in one population, thoracic spines distinct or obliterated, black design of pronotum and elytra can be strongly developed or rather reduced. Similar populations are distributed mosaically in the country and similar forms can be strongly distant that makes difficult subspecies delimitation. Strong individual variability caused several taxa descriptions based on small series of specimens. We are going to show variability level in several populations.

## **Results**

### ***Purpuricenius wachanrui* Levrat, 1858**

*Purpuricenius wachanrui* Levrat, 1858: 261 - "Turquie"; Pic, 1905: 391 - région caucasique, Elbourz: Haute vallée de Chahroun; Aurivillius, 1912: 464 (= *haussknechti* Witte = *aleppensis* Witte = *bilunatus* Schaufuß = *schönfeldti* Heyden) - "Türkei, Kleinasien, Syrien, Persien", "Cypern"; Plavilstshikov,

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- 1940, part. (including *haussknechti* Gahan, 1906): 559, 570, 760 - Asia Minor, Cyprus, Syria, Mesopotamia, Kurdistan, Iran; Villiers, 1967: 363 - Asie Mineure, Irak, Arménie, Iran: “Shemiran, 10 km au nord de Téhéran”, “environs d’Ispahan”, “Shemshak”, “Mardabat”, “Shahrud”; 1979: 115 - Iran: “Ouest du col de Zagheb, près du Khorramabad”, “Daran”, “Taleqan”; Adeli, 1972 - Iran; Lobanov et al., 1982: 253 - Caucasus, Western and South-West Asia; Danilevsky & Miroshnikov, 1985: 214 - Nergam in Nakhichevan Republic of ASSR; Western Asia, Northern Iran; Al-Ali & Ismail, 1987 - 540, part. - Iraq; Rejzek & Hoskovec, 1999: 265 - Turkey; Rejzek, Sama & Alziar, 2001: 266 - Turkey; Rejzek, Sama, Alziar & Sadlo, 2003: 165 - Iran; Sama et al., 2008: 117 - Iran, “Northern and western provinces”; Özdikmen, 2014: 622 - Turkey; 2023: 207, 209 - Turkey: Adana (Misis), Adıyaman (Nemrut Mt., Karadut), Bingöl (Central), Bitlis (Güroymak), Çankırı (between Şabanözü-Orta), Diyarbakır, Elazığ, Konya, Malatya, Muş (Buğlan pass), Tunceli (Munzur Valley, Pülümür), Van (Çatak); Danilevsky, 2020b: 283 - Azerbaijan, Iran, Iraq, Turkey, Cyprus, Syria; Kasatkin, 2021: 298 (= *mesopotamicus* Al-Ali & Ismail) - Iraq, Mosul prov., Siakh-Gyuivez; Turkey (Bulgan Gec., Bitlis, Tunceli), Iran.
- Purpuricenus wachenrui*, Schaum, 1862: 101 (misprint, unavailable name).
- Purpuricenus bilunatus* Schaufuß, 1871: 210 - Insel Cypern.
- Purpuricenus haussknechti* Witte, 1872: 207 - Kurdistan.
- Purpuricenus haussknechti* var. *aleppensis* Witte, 1872:208 - aus der Umgegend von Aleppo.
- Purpuricenus* (s. str.) *wachanrui*, Ganglbauer, 1882: 741 (= *haussknechti* Witte) - “Türkei, Kleinasien, Persien”; Heyden et al., 1891: 346; 1906: 517; Winkler, 1929: 1183; Löbl & Smetana, 2010: 199 - Azerbaijan, Iran, Iraq; Danilevsky, 2012a: 149 - Cyprus, Syria, Turkey.
- Purpuricenus nanus* Semenov, 1907: 254, **syn. nov.** - “Hab. Persiam occidentalem: prov. Gilan: pr. pag. Molla-ali”.
- Purpuricenus wachanrui* var. *schönfeldti* Heyden, 1890a: 79 - Sultanabad in Persien.
- Purpuricenus robusticollis* Pic, 1905: 9 - “Perse”; Ambrus & Grosser, 2013: 468 - “Esfahan prov., 40 km SE Aligudarz, Nowghan env.”, “Lorestan, 17 km SW Dorud, Tut village env., 1995 m.”, “Lorestan prov., Tootmashour, 33.41N 48.90E, 1995 m”; Vartanis, 2023: 1805 - Iran.
- Purpuricenus schonfeldti* var. *atricolor* Pic, 1912a: 4 - “Luristan”.
- Purpuricenus schonfeldti* var. *quadrinotatus* Pic, 1912b: 35 - Perse: Luristan.
- Purpuricenus schonfeldti* var. *diversipennis* Pic, 1915e: 6 - Aleppo.
- Purpuricenus schauffelei* Pic, 1956: 3 - Iran.
- Purpuricenus wachanni*, Davatchi et al., 1959: 241 (misprint, unavailable name) - Iran.
- Purpuricenus mesopotamicus* Al-Ali & Ismail, 1987 - 540, 541, part. - Iraq (Rawanduz): Khan Azad.
- Purpuricenus ivachanrui*, Modarres, 1997 (misprint, unavailable name) - Iran.
- Purpuricenus* (s. str.) *mesopotamicus*, Löbl & Smetana, 2010: 199, part. - Iran.
- Purpuricenus* (s. str.) *robusticollis*, Löbl & Smetana, 2010: 199, part., Iraq.
- Purpuricenus persicus* Vartanis, 2023: 1803, **syn. nov.** - Iran.

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**Type locality.** Asian Turkey without more precise definition.

**Description.** Head black; antennae 11- or 12-segmented; male antennae from hardly surpassing elytral middle to about 2 times longer than body; female antennae reaching elytral middle; pronotum from red to black, usually red with black anterior and posterior margins, or black with red spots; elytra black with red central spots, which can be very small, widely separated, or larger, touching at middle, or large, widely conjugated, or totally disappeared; males from 10.1 to 19.8 mm long, females from 12 to 16.5 mm long.

**Distribution.** South-east Turkey, eastwards from Konya to Iranian border; Cyprus; Syria, Aleppo; West Iran from Turkish border to central provinces; Azerbaijan, southern border of Nakhichevan Republic.

The variability of the species is rather different in different populations. Several populations can be adequately represented by displaying significant series of specimens from the corresponding localities.

***Purpuricenus wachanrui wachanrui* Levrat, 1858**

Tabs 1-8

*Purpuricenus wachanrui* Levrat, 1858: 261 - "Turquie".

**Type locality.** Asian Turkey without more precise definition.

**Description.** Red color dominates on prothorax and elytra; body length in males: 10.1-19.5 mm, body length in females: 12-20 mm.

**Known populations:**

**TURKEY**

Nemrut Dagi, 45 km NEE Adiyaman, 37°57'51.94"N, 38°44'37.52"E, 14.6.-17.6.2008, R.Ambrus: 28 males and 23 females (R.Ambrus collection) - **Map: loc. 2; Tab. 1;** male antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 5 segments) or hardly reaching elytral apex; female antennae 11-segmented, usually surpassing elytral middle; prothorax red, usually with narrow black anterior and posterior stripes; very rare black with central red spot or totally black; red elytral design as wide transverse band more or less narrowed at middle, often divided by black suture or totally separated in two portions.



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Buğlan Geçidi, 8 km SE Solhan, 1700-1800 m, R. Ambrus leg. - 4 males, 3 females (R. Ambrus collection) - **Tab. 2(1)** - male antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 5 segments); female antenna also 11-segmented, reaching to about elytral middle; prothorax red with black margins; elytra red with big red areas narrowly separated at middle, touching or widely conjugated.

Buğlan Geçidi, 30 km E Bingöl, 14.6.1977, S. Kadlec leg. - **Map: loc. 6**; one pair of big specimens (male - 18 mm, female - 19 mm) - M.L. Danilevsky collection; male antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 5 segments); female antennae also 12-segmented, but with strongly reduced 12<sup>th</sup> segment, reaching to about elytral middle; prothorax red with black lateral (male) or ventral (female) sides; red elytral design as wide transverse band more or less narrowed laterally.

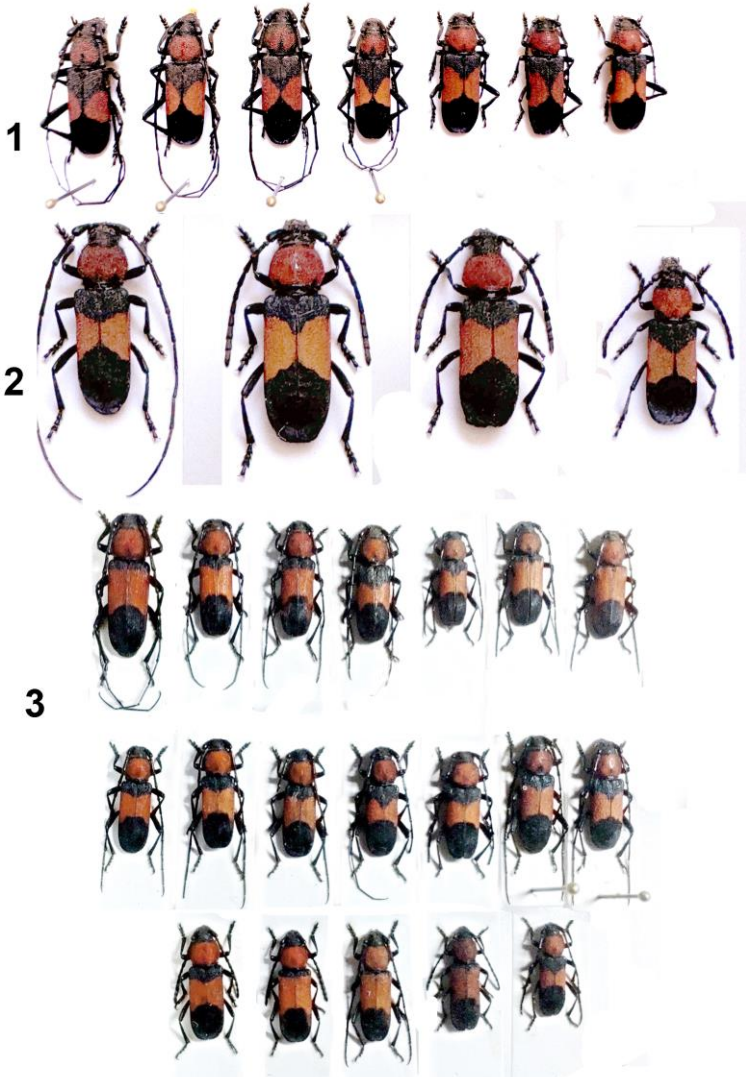
Hakkâri prov., 3 km N of Hakkâri, R. Ambrus leg. (**Map: loc. 7**); 1 male, 3 females - **Tab. 2(2)** - R. Ambrus collection; male antennae 12-segmented, surpassing elytra by 4 segments; female antennae 11-segmented, reaching elytral middle; prothorax red with black margins; elytra with large red areas widely conjugated at middle (with wide red belt narrowed at middle).

**IRAN**

Ardabil, 5 km S Deez, 37°16'N, 48°44'E, 1350m, 5.6.2017, K. Hodek leg. (**Map: loc. 9**) - 16 males (body length: 11.3-17.5 mm) and 3 females (body length: 12.1-16.5 mm) - **Tab. 2(3)** - K. Hodek collection; small specimens of this population are very similar to the type specimens of *P. nanus*, but antennae a little longer and always 12-segmented in males and in females, 12<sup>th</sup> segments in small specimens are considerably reduced, especially in females; antennal length in males is rather variable; antennae of the biggest male are about two times longer than body, but usually in middle size males and in small males - about 1.5 times longer than body, but sometimes - about as long as body; female antennae reaching to about elytral middle; lateral thoracic tubercles indistinct; pronotum red, often with narrow anterior and posterior black stripes or totally red; elytra with central red belt, more or less wide, sometimes narrowed at middle; anterior black elytral area can be very narrow or totally disappeared.



**Tab. 1.** *P. w. wachanrui* (R.Ambrus collection, photo by R. Ambrus):  
 1 - 28 males, 23 females, Turkey, Nemrut Dagı, 45 km NEE Adıyaman,  
 37°57'51.94"N, 38°44'37.52"E, 14.6.-17.6.2008, R.Ambrus leg.; 2 - 1 male,  
 1 female, Adıyaman environs, R. Ambrus leg.



**Tab. 2.** *P. w. wachanrui*: 1 - 4 males, 3 females, Turkey, Buğlan Geçidi, 8 km SE Solhan, 1700-1800 m, R.Ambrus leg. - R. Ambrus collection, photo by R. Ambrus; 2 - 1 male, 3 females, Turkey, Hakkâri prov., 3 km N of Hakkâri, R. Ambrus leg. - R.Ambrus collection, photo by R.Ambrus; 3 - 16 males, 3 females, Iran, Ardabil, 5 km S Deez, 37°16'N, 48°44'E, 1350 m, 5.6.2017, K. Hodek leg. - K.Hodek collection, photo by K.Hodek.

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Type series of *P. nanus* Semenov, 1907 (Gilan, Molla Ali River, 36°36'40"N, 49°32'33"E, 370 m, 15.5.1904, N. Zarudnyi leg. **Map: loc. 10**) originally consisted of 5 specimens (1 male and 4 females); body length: 7.4-11 mm. One pair available now; male - **Tab. 3(1)** - lectotype (present designation), with 2 labels - **Tab. 3(3):** 1 [partly in Russian] - "Гилян: Молла-аля / 15.V.04. / Зарудный"; 2 - "*Purpuricenusa / nanus* Sem." / "Cotyp." / "A. Semenov-Tian-Shansky det." - collection of Zoological Institute of the Russian Academy of Sciences (Saint Petersburg); female - **Tab. 3(2)** - paralectotype (present designation), with 2 labels - **Tab. 3(4):** 1 [partly in Russian] - "Гилян: Молла-аля / 15.V.04. / Зарудный"; 2 - "coll. Semenov-Tian-Shansky" - collection of Zoological Institute of the Russian Academy of Sciences (Saint Petersburg).

Male antennae 11-segmented, shorter than body, reaching last elytral fifth, female antennae slightly surpassing elytral middle; lateral thoracic tubercles obliterated; pronotum about totally red (with narrow basal and apical black stripes); red central elytral band strongly narrowed medially, anterior and posterior black elytral areas rather wide.

Kermanshahan, Shamshir env., 34°59'15"N, 46°25'37"E, 1850 m, 6.6.2015, K. Hodek leg. (**Map: loc. 21**) - 5 males (body length: 14-16.2 mm), 5 females (body length: 14-16.9 mm) - **Tab. 4(1)** - K. Hodek collection; male antennae from about 2 to 1.5 times longer than body, female antennae reaching elytral middle; male antennae 12-segmented, female antennae 11-segmented; pronotum usually red, but one male has black pronotum with two red spots, and two males with wide red areas in the middle of black pronotum; red elytral design usually consists of big triangular spots touching at middle, widely conjugated or contrary narrowly separated; anterior black elytral area always very wide.

Esfahan, "p. Chaharmahal, Ghahderijan 20km W, 23.5.2017, 32°36'N, 51°7'E, 2145m, K.Hodek leg." (**Map: loc. 21**) - 13 males (body length: 7-13.1 mm), 8 females (body length: 10-15.1 mm) - **Tab. 4(2)** - K. Hodek collection; "Isfahan prov., Azizabad, 32°36'N, 51°7'E, 1890 m, 11.6.2018, K.Hodek leg." (**Map: loc. 21**) - 2 males (body length: 8.8-13.0 mm) and 2 females (body length: 11.5-12.0 mm) - M.L. Danilevsky collection; all are also similar to the type series of *P. nanus*; antennae of the biggest male 12-segmented,

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considerably longer than body (surpassing elytral apices by 4 segments); antennae in smaller males 11-12-segmented; more or less longer than body, or about equal to elytral length, or even shorter; female antennae 11-segmented a little surpassing elytral middle; pronotum red with narrow anterior and posterior black stripes; elytra with wide red central band more or less narrowed medially and wide black apical area; anterior black elytral area can be very narrow.

Esfahan, 20 km southwards Shahreza, 31°48'20.6"N, 51°48'50.9"E, 24.5.2017, Dembický leg. (**Map: loc. 25**) - 3 males, body length: 11.2-13.7 mm and 3 females, body length: 11-12.9 mm - **Tab. 5(1)** - K. Hodek collection.

8 males, 8 females - same locality, J. Dalihod leg. - **Tab. 5(2)** - R. Ambrus collection.

Dark specimens; male antennae 12-segmented with well-developed 12<sup>th</sup> segment, from rather shorter than body, to little longer than body or surpassing elytral apices by 2-3 segments; female antennae 11-segmented reaching elytral middle; pronotum from totally red to totally black; elytra from black with small red spots, to big red spots separated or conjugated and to wide red belt - transitional population.

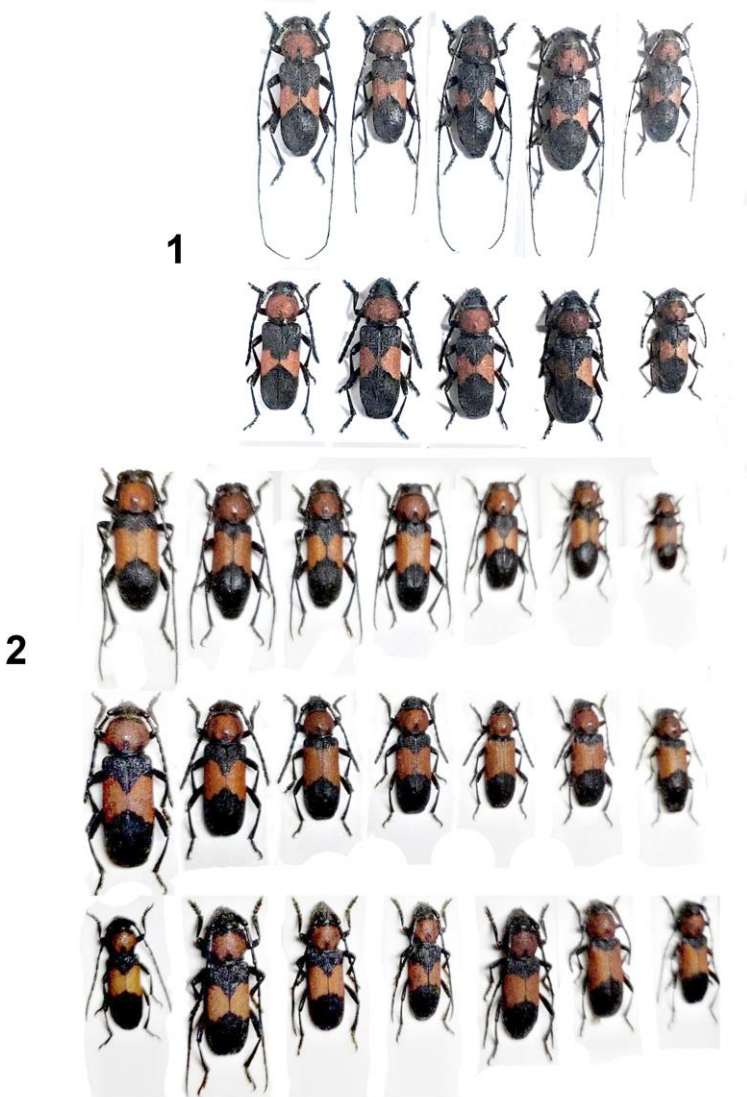
North Hamadan, Gardaneh-ye Avadzh, 35°33'N, 49°10'E, 2500 m, C. Naumann leg. (**Map: loc. 15**) - 7 big specimens (M.L. Danilevsky collection): 5 males (body length: 12-16 mm) and 2 females (body length: 14-15 mm); male antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 3-4 segments); female antennae 11-segmented or 12-segmented, but then 12<sup>th</sup> segment is strongly reduced; prothorax usually with small lateral tubercles; pronotum mostly red with black margins and black postero-central stroke; sometimes pronotum nearly black with two small central spots; red elytral belt usually interrupted medially, but sometimes complete and wide.

Qazwin, Alamut, 36°26'41"N, 50°35'10"E, 2400 m, D. Murastyi leg. (**Map: loc. 12**) - 2 big males (M.L. Danilevsky collection); antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 4 segments); prothorax with obliterated lateral tubercles; pronotum red with black margins; red elytral design wide, but interrupted medially by black suture.





**Tab. 3.** *P. w. wachanrui*: 1 - male-lectotype of *P. nanus* Semenov, 1907, Iran, Gilan, Molla Ali River, 36°36'40"N, 49°32'33"B, 370 m, 15.5.1904, N. Zarudnyi leg.; 2 - female-paralectotype of *P. nanus* Semenov, 1907, Iran, Gilan, Molla Ali River, 36°36'40"N, 49°32'33"B, 370 m, 15.5.1904, N. Zarudnyi leg.; 3 - labels of the lectotype of *P. nanus* Semenov, 1907; 4 - labels of the paralectotype of *P. nanus* Semenov, 1907.



**Tab. 4.** *P. w. wachanrui*: 1 - 5 males, 5 females, Iran, Kermanshahan, Shamshir env., 34°59'15"N, 46°25'37"E, 1850 m, 6.6.2015, K. Hodek leg. - K. Hodek collection, photo by K. Hodek; 2 - 13 males, 8 females, Iran, Esfahan, "p. Chaharmahal, Ghahderijan 20 km W, 23.5.2017, 32°36'N, 51°7'E, 2145 m, K.Hodek leg." - K. Hodek collection, photo by K. Hodek.

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Qazvin, 4 km W Kouhin, 36°22'N, 49°37'E, 1500 m, 31.5.2015, K. Hodek leg. (**Map: loc. 11**) - 1 female (K. Hodek collection); red prothorax, wide central band.

Kordestan, 3.5 km E Dizli, 35°22'N, 46°11'E, 1350 m, 25.5.2019, K. Hodek leg. (**Map: loc. 19**) - 1 male (K. Hodek collection), red prothorax, wide central band, antennae as long as body.

Kordestan, Divandareh, Saral, 35°43'46"N 46°52'53"E, 5-6.2016, Fardin Faizi leg. (**Map: loc. 18**) - 1 male: body length: 13.5mm, 1 female: body length: 10.3 mm (M.L. Danilevsky collection) - male antennae 12-segmented a little longer than body surpassing elytral apices by one apical segment; female antennae 11-segmented reaching to about elytral middle; prothorax with obliterated lateral tubercles; pronotum red with black margins; red elytral dark with two small triangular spots separated medially.

Kordestan, 5 km N of Kamyaran, 2.6.2010, 34°53'N, 46°58'E, 2100 m, Z. Košťál leg. - 16 males, 12 females (Z. Košťál collection), male antennae 12-segmented, from very long, surpassing elytral apex by 4 segments, to rather short, a little longer than body, surpassing elytral apices by one apical segment; female antennae 11-segmented reaching to about elytral middle; no specimens with black thorax or black elytra available.

**IRAQ**

Penjvin, 35°38'N, 45°56'E, 1300 m, 9.6.1976, J. Macek leg. (**Map: loc. 26**) - 1 male: body length: 14.8 mm; antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body (surpassing elytral apices by 4 segments); prothorax with obliterated lateral tubercles; red with black margins; red elytral design interrupted medially;

Same locality, 11.6.1976 & 20.6.1976, J. Macek leg. - 2 females (M.A. Lazarev collection).

**Material** (M.L. Danilevsky collection). *Purpuricenus wachanrui wachanrui*: 1 male, Turkey, 30 km E Bingol, 1400m, 14.6.1977, D. Bernhauer; 1 male, 1 female, Turkey, Buğlan Geçidi, NW Mus, P. Bialooki leg.; 1 male, Iraq, Kurdistan, Penjwin, 1300m, J. Macek leg.; 5 males, 2 females, Iran, Hamadan, Gardaneh-ye Avadzh, 35°33'N, 49°10'E, 2500 m, 6.7.1997, C. Naumann leg.; 2 males, Iran, Qazvin, Alamut Mts., 2400 m, 24-25.6.2016, D. Murastyi leg.;

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2 males, Iran, Davandareh, Saral, 22.5.2016, 1.6.2016, Fardin Faizi leg.; 5 males, 1 female, Iran, Gilan, 5km S Dees, 37°16'N, 48°44'E, 1350 m, 5.6.2017, K. Hodek leg.; 2 males, 2 females, Iran, Isfahan, Azizabad, 32°36'N, 51°7'E, 11.6.2018, K. Hodek leg.

***Purpuricenus wachanrui robusticollis* Pic, 1905, stat. nov.**

Tabs 5(3-4) - 7

*Purpuricenus robusticollis* Pic, 1905: 9 - "Perse".

**Type locality.** Iran ("Perse"); most probably - Zagros Mountains.

**Description.** Black color often dominates on prothorax and elytra; body length in males: 13.8-18 mm, body length in females: 12.9-18 mm.

**Known populations:**

South Hamadan, Baharab, 34°38'N, 48°10'E, 1600 m, 26.5.2017, K. Hodek leg. (**Map: loc. 29**), 10 males, body length: 9.5-13.2 mm, 4 females: 10-14.9 mm - **Tab. 5(3)** - (K. Hodek collection) - dark specimens dominate; male antennae 12-segmented with well-developed 12<sup>th</sup> segment, considerably longer than body, surpassing elytral apices by 3-4 segments, or a little longer than body, surpassing elytral apices by 2-3 segments, female antennae 11-segmented, reaching elytral middle; prothorax without lateral tubercles; pronotum usually totally black, but sometimes with wide or narrow red spot, which can be divided in two small portions; elytra usually with two triangular smaller or larger red spots, or totally black.

South Hamadan, Baharab, 34°38'10"N, 48°11'7"E, 1600 m, 20.5.2017, K. Hodek leg. - 3 males, body length: 10.6-11.3 mm and 2 females, body length: 10.8-11.4 mm - M.L. Danilevsky collection.

Esfahan, 40km SE Aligudarz, Nowghan env. 2254 m, 1.6.2009, 33°11'35.11"N, 50°04'46.74"E, 1.6.2009, R. Ambrus leg. (**Map: loc. 34**), 18 males, 22 females (**Tab. 6**) - R. Ambrus collection; very dark specimens dominate; male antennae 12-segmented with well-developed 12<sup>th</sup> segment from, rather long (surpassing elytral apices by 4 segments) to rather short (hardly reaching elytral apices); female antennae 11-segmented, reaching elytral middle; all males with totally black pronotum; pronotum mostly red in 6 females; 15 males and 4 females with totally black

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elytra; elytra in other males black with small red spots; elytra with big red areas (often conjugated) in 12 females.

Same locality, 31.5.-1.6.2009, 11°35.11'N, 50°04'46.74'E, W. Grosser leg. - 2 black males, body length: 13.7 mm and 13.3 mm (M.L. Danilevsky collection) - antennae 12-segmented with well-developed 12<sup>th</sup> segment, a little longer (surpassing elytral apices by 1 segment) or a little shorter than body; prothorax totally black with obliterated lateral tubercles; elytra totally black.

Same locality, 1.6.2009, W. Grosser leg. - 2 males (body length: 16.0-17.8 mm), 6 females (body length: 10.0-16.9 mm), W. Grosser collection; 2 males totally black, antennae 12-segmented, surpassing elytra by 2-3 segments; female antennae 11-segmented, about reaching elytral middle; 2 females - black with small elytral red spots; 2 females - totally black, 1 female black with small elytral red spots, 1 female with pronotal red area and triangular elytral red spots, 1 female black with triangular elytral red spots.

Lorestan, Razan (18 km NWW Dorud), 1800m, 33°33'N, 48°53'E, 26.5.2017, K. Hodek leg. (**Map: loc. 33**); 5 males (body length: 12.9-16.1 mm), 6 females (body length: 13.4-16.5 mm) - **Tab. 5(4)** (K. Hodek collection) - dark specimens; male antennae 12-segmented with well-developed 12<sup>th</sup> segment, rather long surpassing elytral apices by 4 segments; female antennae 11-segmented, reaching elytral middle; prothorax usually black, or with wider or smaller central red spot; elytra from totally black, to black with small red spots, to big red spots separated or conjugated and to wide red belt; males darker, than females.

Lorestan between Dorud and Kuh-e-Ostorian mt. 2600-3200 m, 4.-6.6.2000, 33°22'N, 49°12'E, M. Kalabza leg.; 7 males, 5 females; 9 specimens are totally black, Z. Košťál collection.

Tut env., 17 km SW Dorud, 1995 m, 3.6.2009, R. Ambrus leg.; 1 male (totally black with very long antennae), 11 females (1 - totally black, other females with red elytral areas: 1 - black pronotum, 2 - black pronotum with small red spots, 7 - mostly red pronotum) - R. Ambrus collection.

Tootmashour env., 33°24'36"N, 48°54'B, 1995m, 31.5.2010, W. Grosser leg.; 1 male (body length: 16.9 mm), antennae surpassing elytral apices by 3 segments, prothorax black, elytra with 2 big round red spots separated by suture; 1 female (body length: 16.0 mm), antennae



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reaching elytral middle, pronotum red with black anterior and posterior margins, elytra with 2 big round red spots conjugated at middle; both specimens in W. Grosser collection.

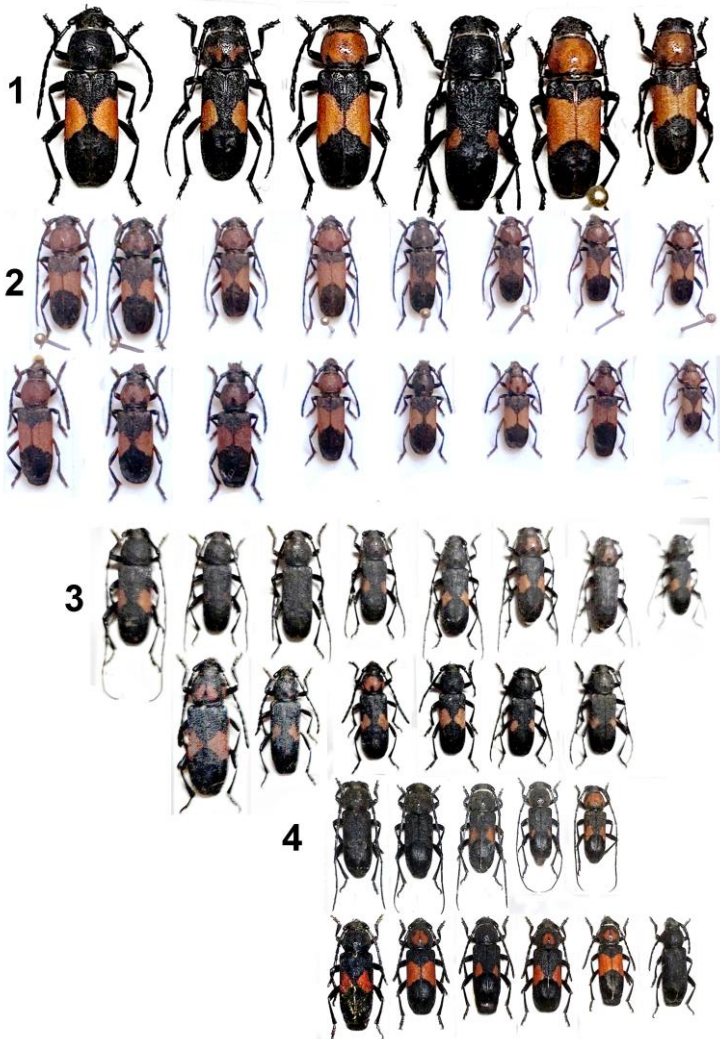
Chaharmahal and Bakhtiari province (Bayer Ahmad-o-Kuhgiluye prov.), 20 km south-eastwards Lordegan, 31°21'17"N, 51°08'48"E, 1940 m, 31.5.2014 W. Grosser; (**Map: loc. 37**), dark population; 32 males (body length: 11.0-18.8 mm), 6 females (body length: 11.4-15.1 mm); both specimens in W. Grosser collection - **Tab. 7** - a pair of this series was designated as paratypes of *P. persicus* Vartanis, 2023; very dark population; male antennae 12-segmented with well-developed 12<sup>th</sup> segment, can be rather long, from about two time longer than body, surpassing elytral apices by 4 segments, or short, about as long as body; female antennae 11-segmented, reaching elytral middle; pronotum often totally black, or with smaller or wider red spots; about a third of available specimens with totally black elytra; others with small, never conjugated red spots, which may contact at suture.

**Material** (M.L. Danilevsky collection). 1 male, 1 female, Iran, Esfahan, 40 km SE Aligudars, 35°17'N, 50°05'E, 2254 m, 31.5.-1.6.2009, W.Grosser leg.; 3 males, 2 females, Iran, Hamadan, Baharab, 1600 m, 20.5.2017, K. Hodek leg.

Available photos of *P. wachanrui wachanrui*:

From K. Hodek:

13 males, 8 females - **Tab. 4(2)** - Iran, Esfahan, Chaharmahal, Azizabad, 20 km W Ghahderijan, 32°36'N, 51°7'E, 2170 m, 11.6.2018, K. Hodek leg.; 1 female, Iran, North Qazvin, 4 km W Kouhin, 1500 m, 36°22'N, 49°37'E, 31.5.2015, K. Hodek leg.; 1 male, Iran, Kordestan, 3.5 km E Dizli, 1350m, 35°22'N, 46°11'E, 25.5.2019, K. Hodek leg.; 1 female (dark), Iran, W Azerbaijan, 5 km W Main Bolagh, 2200m, 36°30'N, 46°50'E, 2200 m, 30.5.2017, K. Hodek leg.; 5 males, 5 females, Iran, Kermanshahan - **Tab. 4(1)** - Shamshir env., 1850 m, 34°59'15"N, 46°25'37"E, 6.6.2015, K. Hodek leg.; 16 males, 3 females - **Tab. 2(3)** - Iran, Ardabil 5 km S Deez, 37°16'N, 48°44'E, 1350 m, 5.6.2017, K. Hodek leg.; 3 males, 3 females - **Tab. 5(1)** - Iran, Esfahan, 20 km southwards Shahreza, 31°48'20.6"N, 51°48'50.9"E, 24.5.2017, Dembický leg.



**Tab. 5.** 1-2: *P. w. wachanrui*: 1 - 3 males, 3 females, Iran, Esfahan, 20 km southwards Shahreza, 31°48'20.6"N, 51°48'50.9"E, 24.5.2017, Dembický leg. - K. Hodek collection, photo by K.Hodek; 2 - 8 males, 8 females, same locality, J. Dalihod leg. - R.Ambrus collection, photo K. Ambrus; 3-4 - *P. w. robusticollis*: 3 - 10 males, 4 females, Iran, South Hamadan, Baharab, 34°38'N, 48°10'E, 1600 m, 26.5.2017, K. Hodek leg. - K.Hodek collection, photo by K. Hodek; 4 - 5 males, 6 females, Iran, Lorestan, Razan (18 km NWW Dorud), 1800 m, 33°33'N, 48°53'E, 26.5.2017, K. Hodek leg. - K.Hodek collection, photo by K.Hodek.



**Tab. 6.** *P. w. robusticollis* - 18 males, 22 females, Iran, Esfahan, 40 km SE Aligudarz, Nowghan env. 2254 m, 1.6.2009, 33°11'35.11"N, 50°04'46.74"E, 1.6.2009, R. Ambrus leg. - R. Ambrus collection, photo by R. Ambrus.

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From R. Ambrus:

As *P. robusticollis*:

18 males, 22 females (dark specimens dominate), Iran, Esfahan, 40 km SE Aligudars, Nowghan env., 33°11'35.11"N, 50°04'46.74"E, 2254 m, 1.6.2009, R.Ambrus leg.

As *P. wachanrui*:

28 males and 23 females, Turkey, 45 km NEE Adiyaman, Nemrut Dagı, 37°57'51.94"N, 38°44'37.52"E, 14.6.-17.6.2008, R. Ambrus leg.; 1 male, 1 female, Turkey, Adiyaman; 2 males, 2 females, Turkey, Tunceli, 7 km NW Pülümür; 1 male, Turkey, Nemrut ad Tatvan, 38°53'N, 42°19'N; 4 males, 3 females, Turkey, Mus, 8 km SE Solhan, Bulgan Gecidi, 1700-1800 m; 1 male, 3 females, Turkey, Hakkâri, 3 km N of Hakkâri; 8 males, 8 females (half-dark specimens); Iran, Esfahan, 20 km southwards Shahreza, 31°48'20.6"N, 51°48'50.9"E, 24.5.2017, J. Dalihod leg.

From M. Holomčík:

1 male, 1 female, Iran, NW Kermanshah, 5 km SE Nowdeshah, Vara env., 1200 m, 35.125278°N, 46.296666°E, 22.5.2019, M. Holomčík leg.; 1 male, Iran, West Azerbaijan, 13 km, W Mahabad, Ebrahimeh, 36.7416667°N, 45.5691667°E, 1850 m, 24.5.2019, M. Holomčík leg.; 2 females, Turkey, Kahta, Nemrut Dagı, 2-14.6.1996, P. Jelinek leg.; 1 male, 1 female, Iran, Esfahan, Shahreza, 24-25.5.2009, J. Dalihod leg.; 2 males, Turkey, Kahta env., Nemrut Dagı, 2-14.6.1996, P. Jelinek leg.; 1 male, 1 female, Iran, Esfahan, 40 km SE Aligudars, Nowghan env. 2254 m, 33°11'35.11"N, 50°04'46.74"E, 31.5.-1.6.2009, W. Grosser leg.; 1 male, 1 female, Iran, Ardabil, 41 km SE of Khalkhal, Dasht Tsharom [near Deez], 37.274722°N, 48.748055°E, 1300-1350 m, 27.5.2019, M. Holomčík leg.; 1 male, Iran, Markazi, 28 km N of Saveh, Vardeh env., 35°16'58"N, 50°19'6"E, 1430 m, 20.5.2019, M. Holomčík leg.; 1 male, 1 female, Iran, Hamadan, Baharab, 1650-1850 m, 21.5.2019, M. Holomčík leg.

From Z. Košťál:

16 males, 12 females, Iran, Kordestan, 5 km N of Kamyaran, 34°53'N, 46°58'E, 2100 m, 2.6.2010 Z. Košťál leg.

Available photos of *P. wachanrui robusticollis*



**Tab. 7.** *P. w. robusticollis* - 37 males, 11 females, Iran, Chaharmahal and Bakhtiari province (Bayer Ahmad-o-Kuhgiluye prov.), 20 km south-eastwards Lordegan, 31°21'17"N, 51°08'48"E, 1940 m, 31.5.2014 W. Grosser - W. Grosser collection, photo by W. Grosser.

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From K. Hodek:

10 males, 4 females, Iran, Hamadan, Baharab, 34°38'N, 48°10'E, 1600 m, 26.5.2017, K. Hodek leg.; 5 males, 6 females, Lorestan - Razan (Dorud env.), 1800 m, 33°33'N, 48°53'E, 26.5.2017, K. Hodek leg.

From W. Grosser:

37 males, 11 females, dark population; Iran, Chaharmahal and Bakhtiari province [Bayer Ahmad-o-Kuhgiluyeh prov.], 20 km south-eastwards Lordegan, 31°21'17"N, 51°08'48"E, 1940 m, 31.5.2014, W. Grosser leg.; 1 male, 1 female, Iran, Lorestan, Tootmashour, 33°41'N, 48°90'N, 1995 m, 31.5.2010, W. Grosser leg.; 1 male, 1 female, Iran, Lorestan, Dorud env., 33°27'37"N, 49°05'10"E, 1523 m, J. Romsauer leg.; 2 males, 3 females, Iran, Esfahan, 40 km SE Aligudars, Nowghan env., 33°11'35.11"N, 50°04'46.74"E, 2254 m, 1.6.2009, W. Grosser leg.

From R. Ambrus:

1 male (dark specimen), Iran, Hamadan, Ganjnameh, 34°45'39"N, 48°26'18"E; 1 male (dark specimens), Iran, Lorestan, Horramabad; 3 males (dark specimens), Iran, Fars, 20 km NE Ardakan; 1 male, 11 females (half-dark specimens), Iran, Lorestan, 17km SW Dorud, Tut env., 1995 m, 3.6.2009, R. Ambrus leg.

From Z. Košťál:

7 males, 5 females, Iran, Lorestan between Dorud and Kuh-e-Ostorian mt. 2600-3200 m, 4-6.6.2000, 33°22'N, 49°12'E, M. Kalabza leg.

## ***Purpuricen* *zarudn* *ianus* *Semenov*, 1903**

### **Tab. 8**

*Purpuricen* *zarudn* *ianus* *Semenov*, 1903: 358 - Persiae austro-orientalis: terra Geh: alveus Rong [26°13'32"N, 60°12'44"E]; terra Kaserkend: vic. Matasend, inter vic. Tshamp et Surmitsh; terra Bampur: vic. Surmitsh [27°11'42"N, 60°27'17"E]; terra Sarhad: Sadh, Zar, vic Tamin [28°41'40"C, 61°10'B]; curs. super. fl. Rud-i-Ijaadis; Villiers, 1967: 363 - Iran: "Baluchestan, Dachtiari", "Sarbaz"; "Iranshahr", "Kerman", "Djiroft"; Ambrus & Grosser, 2013: 469 - Iran, Kerman prov., 30 km S Sirjan; Ambrus & Tichý, 2017: 101 - Pakistan: Balochistan, Tump (90 km W Turbat [26°6'N, 62°3'E]); Iran: Hormozgan, 5 km SE Khoshangan, 415 m, 27°38,393'N; 56°13,187'E; Kerman, 40 km S Sirjan, 1870 m.





**Tab. 8.** *P. zarudnianus*: 1 - 47 males, 15 females, Iran, Kerman, 40 km southwards Sirjan, 1870 m, 29°03'35"N, 55°51'41"E, 30.5.2014, W.Grosser leg. - W. Grosser collection, photo by W. Grosser; 2 - 6 males, 3 females with same data, R. Ambrus leg. - R. Ambrus collection, photo by R. Ambrus.

**Type locality.** South-East Iran.

**Description.** Antennae very long, 11-segmented; male antennae usually more than 2 times longer than body, or shorter to about one third longer than body, female antennae reaching apical elytral forth, always surpassing anterior border of black apical elytral area, or longer, and sometimes surpassing elytral apices; pronotum usually totally red, or sometimes with narrow basal black stripe, or very rare black with big central red spot; elytra black with rather wide red central belt; red elytral are with slightly curved anterior and posterior margins, and very rare narrowed in the middle, sometimes divided by black suture; body length: 11.8-17.0 mm.

**Known populations:** Iran, Kerman env.; Iran, Kerman, 40 km S Sirjan; Iran, Sistan and Baluchestan, Tamin; Iran, Sistan and Baluchestan, 36 km N Iranshahr; Iran, Sistan and Baluchestan, Geh; Iran, Sistan and Baluchestan, Dashtiari; Pakistan, Tump.

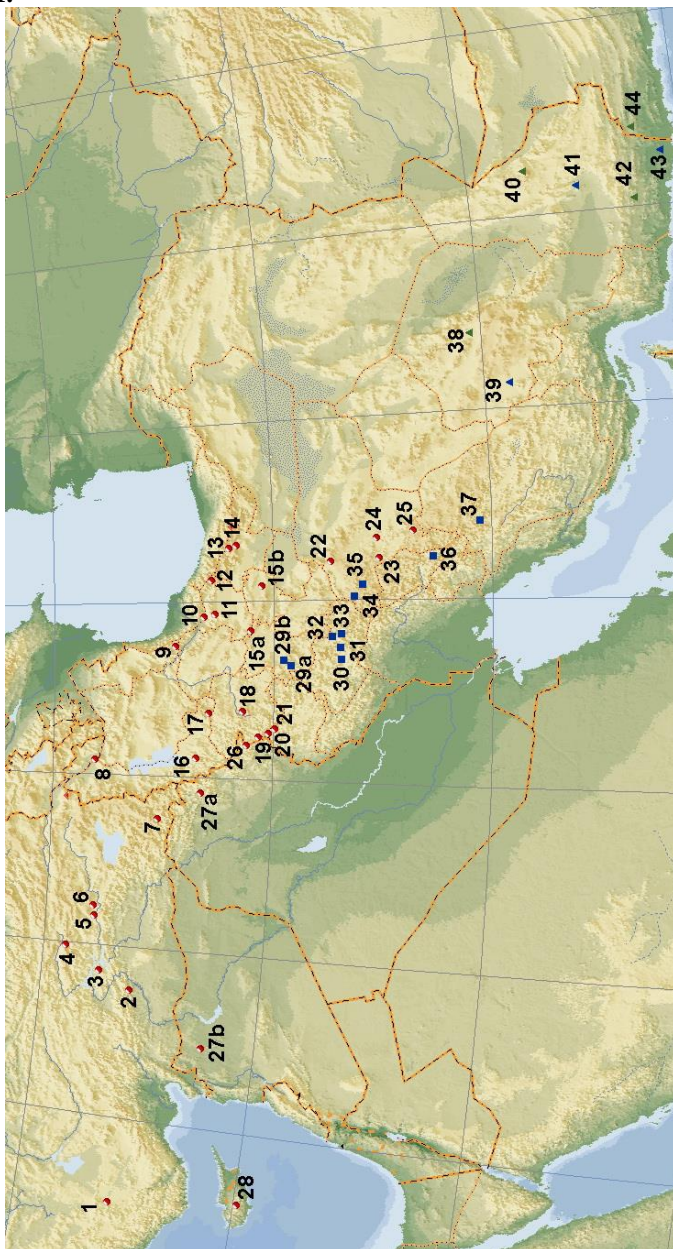
Available photos of *P. zarudnianus*:

47 males (body length: 11.0-19.9 mm), 15 females (body length: 11.8-17.0 mm) - **Tab. 8(1)**, Iran, Kerman, 40km southwards Sirjan, 1870m, 29°03'35"N, 55°51'41"E, 30.5.2014, W.Grosser leg. - W.Grosser collection; 1870 m, 6 males, 3 females - **Tab. 8(2)** - with same data, R. Ambrus leg. - R. Ambrus collection; 1 male, Pakistan, Balochistan, Tump, 90km W Turbat, R. Ambrus leg. - R. Ambrus collection.

**Acknowledgement.** We are very grateful to the staff of Zoological Institute of the Russian Academy of Sciences (Saint Petersburg) and to many friends and colleagues for their photos and valuable information: R. Ambrus (Prague), W. Grosser (Opava), M. Holomčík (Lusatia), M. Lazarev (Moscow), D. Navrátil (Litomyšl), L. Skořepa (Dačice), Z. Košťál (Pardubice).



Map 1.



***P. wachanrui wachanrui***

1 - Turkey, Konya; 2 - Turkey, Nemrut Dagı; 3 - Turkey, Elazığ; 4 - Turkey, Pulumur; 5 - Turkey, 30 km E Bingöl; 6 - Turkey, Buğlan Geçidi; 7 - Turkey, 30 km NW Hakkâri; 8 - Azerbaijan, Nakhichevan, Negram; 9 - Iran, Ardabil, 5 km southwards Deez, 37°16'N, 48°44'E; 10 - Iran, Gilan, Molla Ali River, 36°36'40"N, 49°32'33"E; 11 - Iran, Qazvin, 4km westwards Kouhin, 36°22'N, 49°37'E; 12 - Iran, Qazvin, Alamut, 36°26'41"N, 50°35'10"E; 13 - Iran, Tehran prov., Shemshak, 36°00'56"N, 51°29'10"E; 14 - Iran, Tehran prov., Shemiran, 35°51'3"N, 51°33'6"E; 15a - Iran, North Hamadan, Gardaneh-ye Avadzh, 2500m 35°33'N, 49°10'E; 15b - Iran, Markazi, 28km N of Saveh, Vardeh env.; 16 - Iran, West Azerbaijan, 13km W Mahabad, Ebrahimieh, 36.7416667°N, 45.5691667°E; 17 - Iran, West Azerbaijan, 5 km W Main Bolagh, 36°30'N, 46°50'E; 18 - Iran, Kordestan, Divandareh, Saral, 35°43'46"N 46°52'53"E; 19 - Iran, Kordestan, 3.5km E Dizli 35°22'N, 46°11'E; 20 - Iran, Kermanshahan, Vara; 21 - Iran, Kermanshahan, Shamshir env., 34°59'15"N, 46°25'37"E; 22 - Iran, Esfahan, Varkan, 33°42'56"N, 51°2'57"E; 23 - Iran, Esfahan, Azizabad, 32°36'N, 51°7'E; 24 - Iran, Esfahan; 25 - Iran, Esfahan, 20 km southwards Shahreza, 31°48'20.6"N, 51°48'50.9"E; 26 - Iraq, Penjvin, 35°38'N, 45°56'E; 27a - Iraq, Ravanduz; 27b - Syria, Aleppo.; 28 - Cyprus.

***P. wachanrui robusticollis***

29a - Iran, Hamadan, Baharab, 34°38'10"N, 48°11'7"E; 29b - Iran, Hamadan, Ganjnameh, 34°45'39"N, 48°26'18"E; 30 - Iran, Lorestan, Khorramabad; 31 - Iran, Lorestan, Zaheh; 32 - Iran, Lorestan, Tootmashour; 33 - Iran, Lorestan, Razan near Dorud; 34 - Iran, Esfahan, 40km SE Aligudarz, Nowghan env. 2254 m, 1.6.2009, 33°11'35.11"N, 50°04'46.74"E, W. Grosser leg.; 35 - Iran, Esfahan, Daran; 36 - Iran, Bayer Ahmad-o-Kuhgiluyeh prov., 20 km south-eastwards Lordegan, 31°21'17"N, 51°08'48"E; 37 - Iran, Fars, 20 km NE Ardakan, 30°15'34"N, 51°59'07"E.

***P. zarudnianus***

38 - Iran, Kerman env.; 39 - Iran, Kerman, Sirjan env.; 40 - Iran, Sistan and Baluchestan, Tamin; 41 - Iran, Sistan and Baluchestan,

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36 km N Iranshahr; 42 - Iran, Sistan and Baluchestan, Geh; 43 - Iran, Sistan and Baluchestan, Dashtiari; 44 - Pakistan, Tump.

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*Received: 12.09.2024*

*Accepted: 28.10.2024*

## **Longicorn-beetles (Coleoptera, Cerambycidae) collected in South Kazakhstan by an international collecting trip 2024**

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**Key words:** Coleoptera, Cerambycidae, new subspecies, new data, geography, Russia, Kalmykia, Kazakhstan.

**Abstract:** Totally 20 taxa were collected in South Kazakhstan and South Russia (Kalmykia and Astrakhan region) in May-June 2024. *Vadonia bipunctata kalmykia* Danilevsky, **ssp. n.** is described from the Eastern part of Kalmykia Republic of Russia. A single female of very rare *Aromia moschata vetusta* Jankowski, 1934 was collected near Qyzylorda. *Agapanthia (Epopetes) turanica* Plavilstshikov, 1929 is recorded from Karatau Ridge. Several specimens of *Anoplistes jacobsoni* Baeckmann, 1904 were collected along lower Syr-Darya River - much far northwards all known localities. New locality of *Xylotrechus (Turanoclytus) asellus* (Thieme, 1881) was discovered near Karabastau in Chimkent environs.

## **Introduction**

Cerambycidae fauna of Kazakhstan is relatively well investigated. Still up to know each collecting season allows to collect new taxa and discover new localities. Many new data were recently obtained by three persons: V.L. Perepechayenko, A.I. Gubin and O.V. Pak in May - June, 2024. The way of their expedition was started from north Ciscaucasia (Kalmykia) through North and

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Eastern Kazakhstan to Karatau Mountain Ridge in South Kazakhstan. Collected materials were identified by M.L. Danilevsky.

Acronyms of the collections:

AG - collection of A.I. Gubin (Donetsk)

MD - collection of M.L. Danilevsky (Moscow)

OP - collection of O.V. Pak (Donetsk)

VP - collection of V.L. Perepechayenko (Krasnodar Region)

**Results**

***Vadonia bipunctata kalmykia* Danilevsky, ssp. n.**

Figs 1-4, 13

**Type locality (fig. 13):** Russia, Republic of Kalmykia, Yashkulsky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m.

**Description.** The new subspecies is very close to *Vadonia b. bipunctata* (Fabricius, 1781) from the eastern part of Orenburg Region by about the same elytral color patterns: elytral suture from yellow to narrowly or widely black, elytral apices from yellow to black, same long pubescence of hind male femora, same pair of tibiae spines. *V. b. kalmykia* Danilevsky, **ssp. n.** is separated from it by very dense dark populations of *Vadonia bipunctata sareptana* Pic, 1941 around Volgograd and differs from the nominative subspecies by several small characters: pronotal and elytral punctation notably rougher; pronotal pubescence longer; basal erect elytral setae much longer and are distributed along anterior elytral two thirds, while basal erect elytral setae in the nominative subspecies much shorter and are distributed along anterior one thirds; ventral body pubescence much longer and denser; body length in males: 9.1-15.8 mm; width: 2.9-4.6 mm; body length in females: 10.0-15.2 mm, width: 3.0-5.0 mm.

**Material.** Holotype (fig. 1), male, Russia, Republic of Kalmykia, Yashkulsky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h=-18 m, sands, 20.05.2024, A.I. Gubin leg. - MD; 99 paratypes; 3 males, 3 females, with the same label as holotype - MD; 16 males, 16 females with the same label as holotype - AG; 19 males, 15 females, same data as holotype, but V.L. Perepechayenko leg. - VP;

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13 males, 16 females, same data as holotype, but O.V. Pak leg. - OP.

**Distribution.** Only one population is known: Russia, Republic of Kalmykia, Yashkul'sky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m (fig. 13).

**Bionomy.** The beetles were actively flying, feeding and mating on flowers of *Euphorbia seguieriana* Neck. at sands.

**Etymology.** The subspecies is named according to the location of the type population in Russia - the Republic of Kalmykia.

**Remark.** *Vadonia bipunctata* (Fabricius, 1781) described from "Siberia" is widely distributed in Eurasia from the south of West Europe to West Siberia through Russia, Caucasus and Northern Kazakhstan. The type locality of the species was accepted (Danilevsky, 2014) as the Eastern part of Orenburg Region of Russia. The species is extremely variable and includes 10 subspecies (Danilevsky, 2020) before. The eleventh is described above.

**An annotated list of collected materials:**

*Mesoprionus angustatus* (Jakovlev, 1887) - S Kazakhstan, Jambyl reg., Talas distr., 60 km N Bestam vill., Moynkum Desert, 44°22'55"N, 71°03'24"E, shrub desert, h=353 m, 07.06.2024, by light; 1 male (AG), A.I. Gubin leg.; 1 male (VP), V.L. Perepechayenko leg.

*Psilotarsus hirticollis nudicollis* Danilevsky, 2000 - S Kazakhstan, Turkistan reg., Baydibek distr., NW Karatau Mt. R., 6 km NE Terekty vill., Boralday riv. canyon (fig. 12), 42°52'14"N, 69°49'51"E, h=511 m, 06.06.2024, V.L. Perepechayenko leg. 1 female early in the morning on the surface of the earth.

- S Kazakhstan, Jambyl reg., Jauly distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h=439 m, 06.06.2024 (fig.7); 7 males, 1 female (AG), A.I. Gubin leg.; 3 males (VP), V.L. Perepechayenko. leg. Beetles were collected around 17-18:00 on the border of reed-covered swampy areas near the lake and open burnt steppe. Males were actively flying from the steppe towards the lake. First, a female was found on the ground and 5 males next to her. Another 5 males were caught in flight. Around 18:00, the flight stopped.



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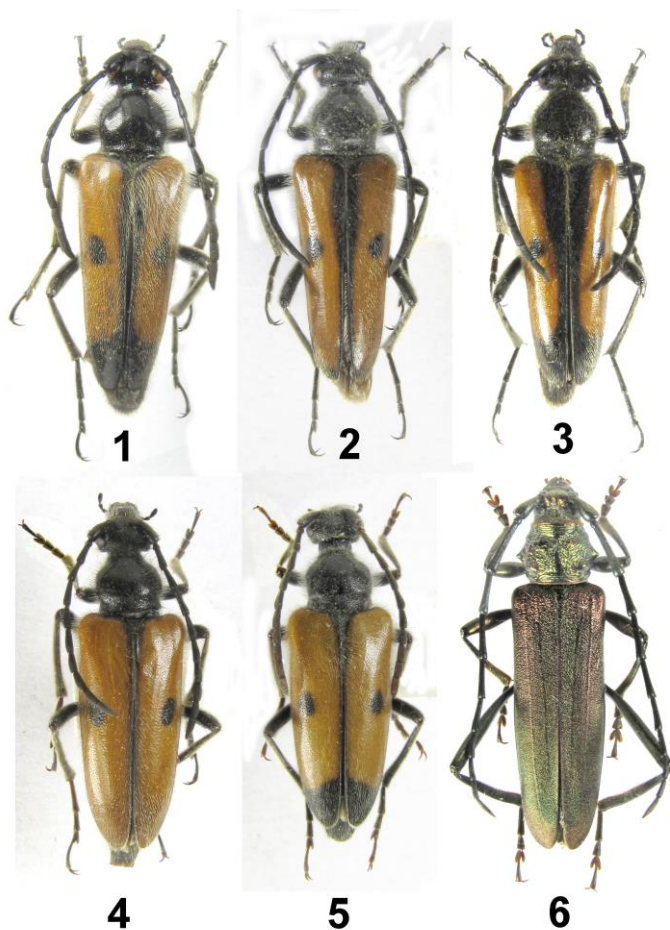
An attempt to catch them by light on the night of 16-17.06.2024 was unsuccessful.

*Vadonia bipunctata kalmykia* Danilevsky, **ssp. n.** (figs. 1-4, 13) - Russia, Republic of Kalmykia, Yashkul'sky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m, sands, 20.05.2024; 16 males, 14 females (AG), A.I. Gubin leg.; 13 males, 16 females (OP), O.V. Pak leg.; 19 males, 15 females (VP, MD), V.L. Perepechayenko leg. The beetles were actively flying, feeding and mating.

*Vadonia bipunctata aralensis* Danilevsky, 2019 (fig. 5) - W Kazakhstan, Aktobe reg., Shalkar distr., 7 km SE Shalkar town, Bolshie Barsuki desert, 47°47'27"N, 59°41'57"E, h=190 m, 26.05.2024; 1 female (AG), A.I. Gubin leg. on the flowers of *Euphorbia seguieriana* Neck. on the sand. Extremely rare taxon; one male and 3 females were known before. First record of the taxon after original description from near Aralsk (46°30'N, 61°54'E). Male (holotype) of *V. b. aralensis* strongly differs from all other subspecies by red antennae, legs and abdomen, relatively short body.

*Pseudovadonia livida* (Fabricius, 1777) - Russia, Astrakhan reg., Krasnoyarsky distr., 8 km NE Dosang vill. env., 46°55'24"N, 47°53'35"E, left bank of Akhtuba riv., 22.05.2024; 1 female (VP), V.L. Perepechayenko leg.

*Neoplocaederus scapularis* (Fischer von Waldheim, 1821) - S Kazakhstan, Jambyl reg., Moiynkum distr., 20 km W Baytal vill., Moiynkum Desert, 44°35'22"N, 71°52'55"E, h=294 m, shrub desert, 08.06.2024; 1 male, 1 female (VP), V.L. Perepechayenko leg.; 5 males, 1 female (AG), A.I. Gubin leg. Beetles were caught sitting on the stems of *Ferula foetida* (Bunge) Regel.



**Figs. 1-4** *Vadonia bipunctata kalmikia* **ssp. n.**: 1 - male, holotype, S Russia, Republic of Kalmykia, Yashkul'sky distr., Khul'khuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m, sands, 20.05.2024, A.I. Gubin leg.; 2-3 - males, paratypes with the same label; 4 - female, paratype with the same label (photos by M.L. Danilevsky).

**Fig. 5.** *Vadonia bipunctata aralensis* Danilevsky, 2019: female, W Kazakhstan, Akto-be reg., Shalkar distr., 7 km SE Shalkar town, Bolshie Barsuki desert, 47°47'27"N, 59°41'57"E, h=190 m, 26.05.2024, A.I. Gubin leg. (photo by M.L. Danilevsky).

**Fig. 6.** *Aromia moschata vetusta* Jankowski, 1934: female, S Kazakhstan, Qyzylorda reg., 5 km SW Zhosaly, 45°27'15"N, 64°3'22"E, h=100 m, 28.05.2024, V.L. Perepechayenko leg. (photo by M.L. Danilevsky).

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*Anoplistes jacobsoni* Baeckmann, 1904 (fig. 9) - S Kazakhstan, Qyzylorda reg., Shieli distr., 6 km SE Tartogay vill., right bank of Syr Darya riv., sandy tugai, 44°24'00"N, 66°16'46"E, h=140 m; 31.05.2024; 1 male (AG), A.I. Gubin leg. The beetle was caught during the day at about 16-17:00, sitting on a bush of *Halimodendron halodendron* Pall.; flying beetles were also observed.

- S Kazakhstan, Qyzylorda reg., S env. of Kazalinsk, right bank of Syr Darya riv., tugai forest, 45°44'31"N, 62°05'29"E, h=66 m, 18.06.2024; 1 male, 1 female (AG), A.I. Gubin leg.; 1 male, 3 females, O.V. Pak leg.; 5 ex. (VP, MD), V.L. Perepechayenko leg. Beetles were caught in the morning sitting on the leaves of *Halimodendron halodendron* Pall.

*Aromia moschata vetusta* Jankowski, 1934 (figs 6, 14) - S Kazakhstan, Qyzylorda reg., 5km SW Zhosaly, 45°27'15"N, 64°3'22"E, h=100 m, 28.05.2024, V.L. Perepechayenko leg.; 1 female (MD). The beetle was observed on the branch of *Elaeagnus angustifolia* L. It is extremely rare subspecies also known from Karatau Ridge. A few specimens only are known. Body, elytra, legs and antennae dark-bronze; pronotum lighter, greenish-goldish; red pronotal elements hardly visible, nearly indistinct; available female anteriorly with two small reddish areas shines through faintly.

*Aromia moschata malukhini* Danilevsky, 2019 - Russia, Astrakhan reg., Krasnoyarsky distr., 8 km NE Dosang vill. env., 46°55'24"N, 47°53'35"E, left bank of Akhtuba riv., 25.06.2024; 14 males, 14 females (VP), V.L. Perepechayenko leg.; 12 males, 10 females (OP), O.V. Pak leg. Beetles were observed on old trees of *Salix* sp.

*Echinocerus floralis floralis* (Pallas, 1773) - S Kazakhstan, Turkistan reg., Sozak distr., 5 km W Kyzylkol vill., Kyzylkol lake, 43°46'36"N, 69°30'37"E, h=337 m, 04.06.2024; 3 ex. (AG), A.I. Gubin leg. The beetles were collected during the day while sitting on the branches of *Tamarix ramosissima* Ledeb.

- W Kazakhstan, Aktobe reg., Yrgyz distr., 9 km E Kurylys vill.,

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48°37'27"N 60°51'12"E, h=116 m, sands, 19.06.2024; 1 ex. (AG), A.I. Gubin leg. The beetle was collected during the day sitting on the flowers of *Achillea* sp.

- S Kazakhstan, Jambyl reg., Merki distr., 4,5 km S Akermen vill., 43°00'17"N, 73°27'55"E, h=625 m, 15.06.2024; 2 ex. (AG), A.I. Gubin leg. The beetles were collected during the day sitting on the flowers of *Achillea* sp.

*Cleroclytus semirufus collaris* Jakovlev, 1885 - S Kazakhstan, Turkistan reg., Karatau Mts., 18 km N Shakpak vill., 43°21'58"N, 69°21'24"E, h=700 m, 23.04.2023; 1 female (OP), O. Pak leg.

*Xylotrechus (Turanoclytus) asellus* (Thieme, 1881) (photo 10) - S Kazakhstan, Jambyl reg., Jualy distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h=439 m, 06.06.2024, 11 males, 6 females (AG), A.I. Gubin leg.; 12 ex. (OP), O.V. Pak leg.; 10 ex. (VP, MD), V.L. Perepechayenko leg. The beetles were collected during the day on the trunks and branches of old trees *Elaeagnus angustifolia* L., they were actively running, flying and mating, some females were hiding under the bark.

- S Kazakhstan, Jambyl reg., Jambyl distr., 2 km S Karakemer vill., 43°03'55"N, 71°05'12"E, h=491 m, 07.06.2024, 1 female (AG), A.I. Gubin leg. The beetle was collected during the day on the trunk of old *Elaeagnus angustifolia* L.
- S Kazakhstan, Almaty reg., Balkhash distr., 4 km N Baribaev vill., Kunaev bridge env., left bank of Ili riv., 44°57'47"N, 75°46'47"E, h=378 m, tugai, 13.06.2024, 1 female (AG), A.I. Gubin leg.; 1 male, 1 female (OP), O.V. Pak leg.; 4 ex. (VP), V.L. Perepechayenko leg. The beetles were collected during the day on the trunks and branches of old trees *Elaeagnus angustifolia* L.
- S Kazakhstan, Qyzylorda reg., Shieli distr., 6 km SE Tartogay vill., right bank of Syr Darya riv., sandy tugai, 44°24'00"N, 66°16'46"E, h=140 m, 17.06.2024, 2 females (AG), A.I. Gubin leg. The beetles were collected during the day on the trunks and branches of old trees *Elaeagnus angustifolia* L.

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- W Kazakhstan, Aktobe reg., Temir distr., 5.5 km N Temir vill., 49°11'08"N, 57°06'12"E, h=226 m, 20.06.2024, 1 female (OP), O.V. Pak leg. The beetle was collected during the day on the trunk of old *Elaeagnus angustifolia* L.

*Xylotrechus (Turanoclytus) namanganensis* (Heyden, 1885) – S Kazakhstan, Jambyl reg., 4.5 km S Akermen, 43°00'17"N, 73°27'55"E, h=625 m, 15.6.2024; 1 male (AG) - A.I. Gubin leg.

*Chlorophorus faldermanni* (Faldermann, 1837) - S Kazakhstan, Qyzylorda reg., Shieli distr., 6 km SE Tartogay vill., right bank of Syr Darya riv., sandy tugai, 44°24'00"N, 66°16'46"E, h=140 m, 17.06.2024, 1 female (AG), A.I. Gubin leg. The beetle was observed during the day on the leaves of *Elaeagnus angustifolia* L.

- S Kazakhstan, Qyzylorda reg., Kazaly distr., S env. of Kazalinsk, right bank of Syr Darya riv., 45°44'31"N, 62°05'29"E, h=66 m, tugai, 18.06.2024, 1 male, 1 female (AG), A.I. Gubin leg.; 1 female (OP), O.V. Pak leg. The beetles were observed during the day on the leaves of *Elaeagnus angustifolia* L.

*Phytoecia pustulata murina* (Marseul, 1870) - Russia, Republic of Kalmykia, 8 km E Elista, 46°18'52"N, 44°23'02"E, h=149 m, 20.05.2024; 1 male, 1 female (AG), A.I. Gubin leg. swipping the grass.

*Agapanthia violacea* (Fabricius, 1775) - Russia, Astrakhan reg., Krasnoyarsky distr., 8 km NE Dosang vill. env., 46°55'24"N, 47°53'35"E, left bank of Akhtuba riv., 22.05.2024; 1 female (VP), V.L. Perepechayenko leg.

*Agapanthia soror* Kraatz, 1882 - S Kazakhstan, Jambyl reg., Talas distr., NW Karatau Mt. R., 7.5 km S Karaoi vill., 43°13'02"N, 70°04'42"E, h=908 m, 05.06.2024; 2 males, 2 females, (VP, MD), V.L. Perepechayenko leg.; 8 males, 7 females (AG), A.I. Gubin leg.; 3 males, 2 females (OP), O.V. Pak leg. The beetles were collected during the day on the stems of *Prangos pabularia* Lindl. and in flight, actively flying and mating.

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- S Kazakhstan, Turkistan reg., Baydibek distr., 5 km N Shajan vill., 43°04'49"N, 69°23'45"E, h=393 m, 05.06.2024, 1 male (AG), A.I. Gubin leg. The beetle was caught in flight during the day in thickets of *Alcea nudiflora* (Lindl.) Boiss.
- S Kazakhstan, Turkistan reg., Baydibek distr., NW Karatau Mt. R., 4 km E Turakty vill., 42°51'48"N, 69°46'27"E, h=590 m, 06.06.2024, 1 female (AG), A.I. Gubin leg.
- S Kazakhstan, Jambyl reg., Jualy distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h=439 m, 06.06.2024; 1 male (AG), A.I. Gubin leg.
- S Kazakhstan, Almaty reg., Jambyl distr., 12.5 km W Kenen vill., Chu-Ili Mt. R., 43°25'57"N, 74°54'56"E, h=1017 m, 15.06.2024; 1 female (AG), A.I. Gubin leg. The beetle caught during the day on the stem of *Prangos pabularia* Lindl.

*Agapanthia dahli dahli* (Richter, 1820) - Russia, Astrakhan reg., Krasnoyarsky distr., Zaykovka vill. env., 46°35'01"N, 48°18'01"E, h= -22 m, 22.05.2024, stem of *Carduus* sp.; 1 female (AG), A.I. Gubin leg.

- Russia, Astrakhan reg., Krasnoyarsky distr., 8 km NE Dosang vill. env., 46°55'24"N, 47°53'35"E, left bank of Akhtuba riv., 22.05.2024; 1 male (VP), V.L. Perepechayenko leg.
- W Kazakhstan, Aktobe reg., Temir distr., Sagashili (Pokrovka) vill. env., 49°18'50"N, 57°02'33"E, h= 242 m, Temir riv. bank, 25.05.2024; 5 males, 3 females (AG), A.I. Gubin leg.; 1 male, 1 female (VP), V.L. Perepechayenko leg.
- S Kazakhstan, Turkistan reg., Sozak distr., NW Karatau Mt. R., 10 km E Taskomirsai vill., 43°27'02"N, 69°23'35"E, h=757 m, 05.06.2024, stems of *Carduus* sp.; 2 males, 1 female (AG), A.I. Gubin leg.

*Agapanthia dahli alexandris* Pic, 1901 - S Kazakhstan, Jambyl reg., Talas distr., NW Karatau Mt. R., 7.5 km S Karaoui vill., 43°13'02"N, 70°04'42"E, h=908 m (fig. 11), stems of *Alcea nudiflora* (Lindl.) Boiss., 05.06.2024; 3 females (AG), A.I. Gubin leg.; 3 males, 3 females (OP), O.V. Pak leg.

- S Kazakhstan, Turkistan reg., NW Karatau Mt. R., Kentau distr., 5 km S Ashysay vill., Ashysay canyon, 43°30'47"N,

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68°52'21"E, h=750 m, mountain meadows, 03.06.2024, 1 female (OP), O.V. Pak leg.

- S Kazakhstan, Jambyl reg., Jualy distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h= 439 m, 06.06.2024; 1 male (AG), A.I. Gubin leg.
- S Kazakhstan, Turkistan reg., Baydibek distr., 5 km N Shajan vill., 43°04'49"N, 69°23'45"E, h=393 m, stem of *Alcea nudiflora* (Lindl.) Boiss. 05.06.2024; 1 male, A.I. Gubin leg.

*Agapanthia turanica* Plavilstshikov, 1929 - S Kazakhstan, Jambyl reg., Talas distr., NW Karatau Mt. R., 7.5 km S Karaoi vill., 43°13'02"N, 70°04'42"E, h=908 m, 05.06.2024; 2 males, 4 females, (VP, MD), V.L. Perepechayenko leg.



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**Fig. 7.** *Psilotarsus hirticollis nudicollis* Danilevsky, 2000: female, S Kazakhstan, Jambyl reg., Jualy distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h=439 m, 06.06.2024, photo by A.I. Gubin.

**Fig. 8.** *Vadonia bipunctata kalmykia* Danilevsky, **ssp. n.**: male and female, Russia, Republic of Kalmykia, Yashkul'sky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m, sands, photo by A.I. Gubin.

**Fig. 9.** *Anoplites jacobsoni* Baeckmann, 1904: male, W Kazakhstan, env. of Kazalinsk, right bank of Syr Darya riv., tugai forest, 45°44'31"N, 62°05'29"E, h=66 m, 18.06.2024, photo by A.I. Gubin.

**Fig. 10.** *Xylotrechus (Turanoclytus) asellus* (Thieme, 1881): male and female, S Kazakhstan, Jambyl reg., Jualy distr., 6.5 km NW Karabastau vill., Bilikol lake, 42°58'22"N, 70°45'29"E, h=439 m, 06.06.2024, photo by A.I. Gubin.

**Fig. 11.** S Kazakhstan, Jambyl reg., Talas distr., NW Karatau Mt. R., 7.5 km S Karaoi vill., 43°13'02"N, 70°04'42"E, h=908 m - locality of *Agapanthia dahli alexandris* - photo by A.I. Gubin.

**Fig. 12.** S Kazakhstan, Turkistan reg., Baydibek distr., NW Karatau Mt. R., 6 km NE Terekty vill., Boralday riv. canyon, 42°52'14"N, 69°49'51"E, h=511 m, locality of *Psilotarsus hirticollis nudicollis*, photo by A.I. Gubin.

**Fig. 13.** S Russia, Republic of Kalmykia, Yashkul'sky distr., Khulkhuta vill. env., 46°19'19"N, 46°22'16"E, h= -18 m, sands, type locality of *Vadonia bipunctata kalmykia* Danilevsky, **ssp. n.** photo by A.I. Gubin.

**Fig. 14.** S Kazakhstan, Qyzylorda reg., 5 km SW Zhosaly, 45°27'15"N, 64°3'22"E, h=100 m, locality of *Aromia moschata vetusta*, photo by A.I. Gubin.

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*Received: 14.09.2024*

*Accepted: 26.10.2024*

**Taxonomic Note on *Xylotrechus* (s. str.) *ibex* (Gebler, 1825)  
(Coleoptera, Cerambycidae, Cerambycinae)**

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**Key words:** Coleoptera, Cerambycidae, Cerambycinae, taxonomy, new status.

**Abstract:** The status of *Xylotrechus rectangulus* (Motschulsky, 1875) is downgraded to subspecies rank and the name is accepted as *Xylotrechus ibex rectangulus* (Motschulsky, 1875), **stat. nov.**

**Acronyms of the collections:**

ES - collection of E.V. Sergeeva (Tobolsk, Russia).

KH - collection of K. Hadulla (Troisdorf, Germany).

MD - collection of M.L. Danilevsky (Moscow, Russia).

ML - collection of Maxim Lazarev (Moscow, Russia).

MS - collection of M.E. Smirnov (Ivanovo, Russia).

MSPU - collection of Moscow State Pedagogical University  
(Moscow, Russia).

VU - collection of V.E. Ustinov (Moscow, Russia).

ZMM - collection of Zoological Museum of Moscow University  
(Moscow, Russia).

**Results**

*Xylotrechus ibex* (Gebler, 1825) in the traditional sense occupies a huge area from Western Europe to Pacific Ocean, including Mongolia, Korea and China (Aurivillius, 1912; Plavilstshikov, 1940; Löbl & Smetana, 2010; Danilevsky, 2020). It is very common in certain areas of Siberia, but rather rare in Europe.

Recently the taxon was divided in two species (Hass et al., 2024):

*X. ibex* (Gebler, 1825) (= *angulosus* Motschulsky, 1875: 150 - described from “environs du Lac Inderskoe près de l'Oural”) - distributed in Europe and Western Asia (105 specimens studied) and *X. rectangulus* (Motschulsky, 1875) (= *fugitivus* Thieme, 1881 - described from “Amur”, = *interruptus* Pic, 1902e - described from “Sibérie, ?Japon”) - distributed in the most part of Siberia, Mongolia, Korea and China (12 specimens studied) on the bases of many small characters, which are discussed below. Both taxa are nowhere sympatric.

Hass et al. (2024) wrongly included Japan in the area of their *X. rectangulus* (Motschulsky, 1875), which is absent in Japan. Only rare cases of import of specimens from the mainland are known.

According to the lectotype designations (Hass et al., 2024), *X. ibex* was described from “Altai”; *X. rectangulus* - was described from “Daourie méridionale” - on the bases of holotype label.

14 morphological distinguishing characters were listed by Hass et al. (2024: 162), including 6 based on genitals, which cannot be discussed here, as significance of observed small differences is doubtful and the limits of individual variability were not shown by the authors. Recently many publications show a great level of variability in Cerambycidae genitals inside one species, or inside one population (see: Hodek, 2021: 1168 for *Agapanthia* Audinet-Serville, 1835; Lazarev, 2022: 221-222 for *Echinocerus* Mulsant, 1862; 2023: 68, 71, 76, 79 for *Pilemia* Fairmaire, 1864).

According to Hass et al. (2024), *X. ibex* is characterized by several attributes: dense yellow-brown pubescence of elytral pale stripes, sutural elytral stripe distinct back to transverse subapical elytral stripe, subapical elytral stripe wide, middle elytral stripe is fused with sutural stripe, male elytra between middle and subapical stripes often with distinct pale pubescence (Fig. 6), subapical stripe complete, prosternal process narrow, mesosternal process narrow.

From the other side in *X. rectangulus* (sensu Hass et al., 2024): elytral pale stripes are yellowish and not so dense, sutural elytral stripe absent, subapical elytral stripe wide, middle elytral stripe is separated from sutural stripe, elytra between middle and subapical stripes without pale pubescence, subapical stripe partly reduced laterally, prosternal process wide, mesosternal process wide.

In fact, all distinguishing characters are not quite stable. Many of them can be observed in a small number of specimens only. Most

of described features are mixed in many known populations. So, both taxa must be accepted as subspecies of one species: *X. ibex ibex* (Gebler, 1825), **stat. nov.** (Figs 1-6) and *X. i. rectangulus* (Motschulsky, 1875), **stat. nov.** (Figs 7-9).

The density and color of elytral pale stripes are rather individual for each specimen from eastern and western populations, and in general both are not real distinguishing characters.

Sutural elytral stripe is really more or less developed in *X. i. ibex* and is absent in *X. i. rectangulus*, but sometimes it is considerably reduced in *X. i. ibex*.

Subapical elytral stripe can also be rather wide in the nominative subspecies as in the neotype of *Clytus angulosus* Motschulsky, 1875 (Abb. 2a - Hass et al., 2024: 155) from Uralsk (now in Kazakhstan).

Middle elytral stripe is always separated from sutural stripe in *X. i. rectangulus* (Figs 7-9), but can be also separated in *X. ibex ibex*, as for example in the lectotype (Abb. 1a - Hass et al., 2024: 155), in the neotype of *Clytus angulosus* (Abb. 2a - Hass et al., 2024: 155), in a female from Altai (Fig. 1), or in a female from Samara Region (Fig. 3).

Pale elytral pubescence between middle and subapical stripes in males (Fig. 6) is a very rare character and is known in a small number of *X. i. ibex* specimens. It is absent in specimens from Volga river valley (Figs 2-3), from Tyumen Region (Figs 4-5), from Germany (Abb. 3b - Hass et al., 2024: 156), as well as in the neotype of *Clytus angulosus* Motschulsky, 1875 (Abb. 2a - Hass et al., 2024: 155) from Uralsk (now in Kazakhstan).

Subapical stripe is often very narrow in *X. i. ibex*, as for example in its lectotype (Abb. 2a - Hass et al., 2024: 155) or just contrary, rather wide in *X. i. rectangulus* (Fig. 9).

Prosternal process in all available specimens of *X. i. rectangulus* is extremely narrow.

Moreover both taxa were never observed to be sympatric, which clearly indicates their subspecies nature.

**Material.** *X. ibex ibex*: 1 female, Russia, Altai Republic, Artybash, 15.6.1981, N. Krivosheina leg. - MD; 1 male, E Kazakhstan, 20 km N Zyryanovsk (now Altai), Putintsevo, 8-29.6.2006, K. Hadulla leg. - MD; 1 male with same

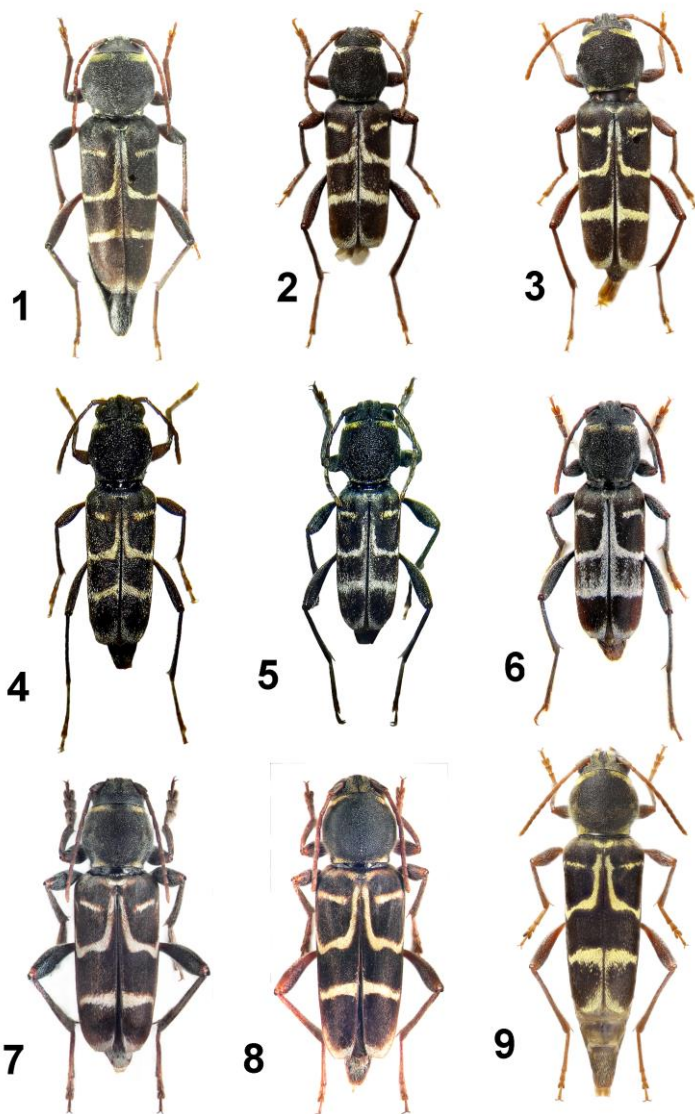
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label - KH; 1 male, Russia, Samara Region, Zhiguli, 6.7.1952, V. Grechkin leg. - ZMM; 1 female from same locality, 13-15.7.1952, V. Grechkin leg. - ZMM; 1 male, 1 female, Russia, Tyumen Region, Aromashevo District, 7 km NNW Slobodchiki, "Alabuga" reserve, 2-4.7.2024, E. Sergeeva leg. - ES.

***X. ibex rectangulus*:**

1 female, Russia, Tuva Republic, Ishtii-Khem, 7.1974, M. Danilevsky leg. - MD; 2 males, 2 females, Russia, Amur Region, Kundur, 28.5.1975, M. Danilevsky leg. - MD, ML; 1 male, Russia, Khabarovsk Region, Bychikha, 16.5.1976, A. Kompantsev leg. - ML; 2 males, Russia, Maritime prov., Arseniev env., 7.1990, R. Čermak leg. - MD; 1 male, 6 females, Russia, Maritime prov., 30 km NW Arseniev, 44°23'10"N, 133°4'35"E, 300 m, 27.6.2018, A. Shamaev leg. - MD; 1 male, Russia, Maritime prov., Lazo env., 18.7.2006, M. & L. Smirnov leg. - MD; 1 female, Russia, Maritime prov., Lazo reserve, 43°15'17"N, 134°07'59"E, 17.7.2005, K. Makarov leg. - ML; 1 male, 1 female, Russia, Maritime prov., Sokoltchi, 27-28.6.1979, A. Kompantsev leg. - MD, ML; 1 female, Russia, Maritime prov., Muraveika, 27.7.1988, S. Nikireev leg. - MD; 1 female, Russia, Maritime prov., Kedrovaya Pad', 9.5.1967, B. Mamaev leg. - MD; 1 male, Russia, Maritime prov., 20 km SE Ussuriysk, Gorno-Tayozhnoe, 23-25.6.2021, V. Ustinov - VU; 1 female, Russia, Maritime prov., Samarka, 15.6.1990, S. Khvylya - VU.

**Acknowledgements.** We are very grateful to Alexey Gusakov (Zoological Museum of Moscow University, Russia), Kirill Makarov (Moscow Pedagogical State University, Russia), Maxim Lazarev (Free Economic Society of Russia, Moscow, Russia), Maxim Smirnov (Ivanovo, Russia), Vadim Ustiunov (Moscow, Russia) and Karl Hadula (Troisdorf, Germany) for supplying us with specimens for study and several good photos.



**Figs 1-6.** *Xylotrechus ibex ibex*: 1 - female, topotype, Russia, Altai Republic, Artybash, 15.6.1981, N. Krivosheina leg., photo by M.L. Danilevsky; 2-3 - male (2) and female (3), Russia, Samara Region,

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Zhiguli, 6.7.1952, V. Grechkin leg., photo by M.L. Danilevsky; 4-5 - male (4) and female (5), Russia, Tyumen Region, Aromashevo District, 7 km NNW Slobodchiki, "Alabuga" reserve, 2-4.7.2024, E. Sergeeva leg., photo by E.V. Sergeeva; 6 - male, Kazakhstan, East-Kazakhstan Region, Putintsevo, 8-29.6.2006, K. Hadulla leg., photo by M.L. Danilevsky.

**Figs 7-9.** *Xylotrechus ibex rectangulus*: 7-8 - male (7) and female (8), Russia, Maritime prov., Lazo District, Preobrazhenie, 14.7.2004, M. & L. Smirnov leg. (MS), photo by M.E. Smirnov; 9 - female, Russia, Maritime prov., 50 km SW Ussuriysk, 480 m, 29.V.2019, A. Zaitsev leg. (MSPU), photo by K.V. Makarov.

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*Received: 14.09.2024*

*Accepted: 25.10.2024*



**Study of the genus *Anthrenus* subgenus *Anthrenodes*. Part 3.  
Two new species from Yemen  
(Coleoptera, Dermestidae, Megatominae)**

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**Key words:** Taxonomy, new species, description, Coleoptera, Dermestidae, *Anthrenus*, *Anthrenodes*, Yemen.

**Abstract:** The following species from Yemen are described, illustrated and compared with similar species: *Anthrenus* (*Anthrenodes*) *haladai* **sp. nov.**, *Anthrenus* (*Anthrenodes*) *maribensis* **sp. nov.** A list of species recorded from Yemen is added.

## **Introduction**

The subgenus *Anthrenodes* Chobaut, 1898 of the genus *Anthrenus* Geoffroy, 1762 currently contains 36 species worldwide (Háva 2024a, b) and only three species are known from the Yemen including Socotra Island (Háva 2017, 2024a).

The subgenus is characterized by antennae consisting of 10 antennomeres. Males differ from females by the shape of the antennal club. In males, the terminal antennomere is larger or longer than the penultimate one; in females it is as long as the penultimate one. Adults can be found on plants, but also in households, where the larvae are harmful to different commodities of natural origin. They are feared pests in museum collections (Peacock, 1993; Háva 2024b). Two new species are described below.

## **Material and methods**

The size of the beetles or of their body parts can be useful in species recognition and thus, the following measurements were made:

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TL: total length - linear distance from anterior margin of pronotum to apex of elytra.

EW: elytral width - maximum linear transverse distance.

The material mentioned is deposited in (JHAC) - Jiří Háva, Private Entomological Laboratory & Collection, Únětice u Prahy, Prague-West, Czech Republic.

Specimens of the presently described species are provided with red, printed label with text as follows:

„HOLOTYPE [or PARATYPE] *species name* sp. nov. Jiří Háva det. 2024”.

## Results

### *Anthrenus (Anthrenodes) haladai* sp. nov.

Figs 1-4

**Description.** Male. Body TL 3.0 mm, EW 2.3 mm; body brown, small, oval. Dorsal surface covered by brown, yellow and white scales. Individual scales small, broad, subtriangular.

Head covered by intermixed yellow and white scales. Antennae with 10 antennomeres, antennomeres I-VIII brown, IX-X dark brown, antennal club with 3 antennomeres, compact (Fig. 2). Frons with median ocellus. Eyes with entire median margin. Palpomeres brownish-black.

Pronotum covered with intermixed white and yellow scales laterally, with brown scales centrally on disc (Fig. 1).

Scutellum small, triangular without scales.

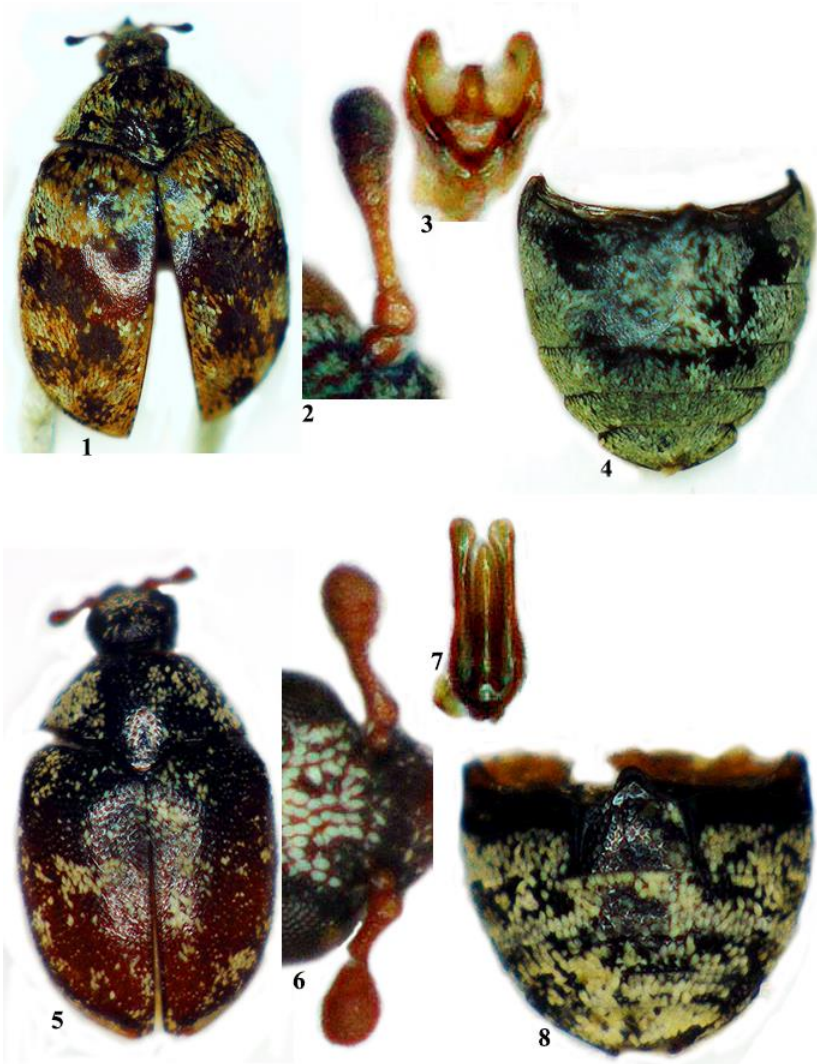
Elytra with brown, yellow and white scales; brown scales forming spots on each elytron, other parts covered by intermixed white and yellow scales. Epipleuron with white scales.

Ventral surface covered with white scales. Prosternum only with white scales. Metasternum only with white scales. Abdominal ventrites I-V without spots on the middle and antero-lateral margins, covered with only white scales (Fig. 4).

Legs brown with white scales and white setae.

Male aedeagus very small, median lobe slightly curved (Fig. 3).

**Female.** Unknown.



**Figs. 1-4.** *Anthrenus* (*Anthrenodes*) *haladai* **sp. nov.**: 1 - body, dorsal aspect; 2 - antenna; 3 - male genitalia; 4 - abdomen.

**Figs. 5-8.** *Anthrenus* (*Anthrenodes*) *maribensis* **sp. nov.**: 5 - body, dorsal aspect; 6 - antenna; 7 - male genitalia; 8 - abdomen.

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**Differential diagnosis.** The new species differs from *A. hulai* Háva, 2017 by the form of the body, dorsal colouration and ventral scales (*A. hulai* - dorsal surface covered with grey and brown scales, ventral side mainly with grey scales) and the structure of the antennae and male genitalia; the same characters found in the other Yemeni species.

**Type material.** Holotype (♂): S Yemen, Lawdar NE, Adan, 13°53'N, 45°48' E, 1145 m, 22.10.2005, P. Kabátek lgt. - JHAC.

**Etymology.** Patronymic, dedicated to the Czech entomologist, specialist in Hymenoptera, Jiří Halada (Czech Republic).

### *Anthrenus (Anthrenodes) maribensis* sp. nov.

Figs 5-8

**Description.** Males. Body TL 1.7-1.8 mm, EW 1.1-1.2 mm; head, pronotum dark brown, elytra brown, small, oval. Dorsal surface covered with white scales. Individual scales small, broad, subtriangular.

Head covered with white scales. Antennae with 10 antennomeres, antennomeres brown, antennal club with 3 antennomeres, compact (Fig. 6). Frons with median ocellus. Eyes with entire median margin. Palpomeres brown.

Pronotum covered with white scales (Fig. 5).

Scutellum small, triangular without scales.

Elytra with white scales. Epipleuron with white scales.

Ventral surface covered with white scales. Prosternum only with white scales. Metasternum only with white scales. Abdominal ventrites I-V without spots in the middle and antero-lateral margins, covered with only white scales (Fig. 8).

Legs brown with white scales and white setae.

Male aedeagus (Fig. 7).

**Female.** Unknown.

**Differential diagnosis.** The new species differs from *A. malkini* Mroczkowski, 1980 and *A. pulchellus* Gestro, 1889 by the very small body form, the body covered only with white scales and the structure of the antennae and male genitalia; the same characters found in the other Yemeni species.

**Type material.** Holotype (♂): Yemen N, Wadi Sudd, 10 km W Marib, 15°24'N, 45°16'E, 1120 m, 8.10.2005, J. Halada lgt. - JHAC.

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Paratype (1 ♂): same data as holotype - JHAC.

**Etymology.** Toponymic, named for Marib city, where the holotype was collected.

### **List of *Anthrenodes* species recorded from Yemen**

*A. haladai* **sp. nov.**

*A. hulai* Háva, 2017

*A. malkini* Mroczkowski, 1980

*A. maribensis* **sp. nov.**

*A. pulchellus* Gestro, 1889

**Acknowledgements.** I would like to thank to Petr Kabátek and Jiří Halada (both Czech Republic) for providing me the interesting material and to Larry G. Bezark (California, U.S.A.) for a revision of the English manuscript.

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*Received: 10.09.2024*

*Accepted: 20.10.2024*

**Taxonomic notes on longhorned beetles with the descriptions of several new taxa (Coleoptera, Cerambycidae). Part 2**

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**Key words:** Coleoptera, Cerambycidae, taxonomy, zoogeography, new subgenus, new synonyms, restored name, new status, new name.

**Abstract:** Many newly published taxonomy modifications are discussed. Several taxonomy news are proposed. Nine subspecies names of *Polyarthron pectinicornе* (Fabricius, 1793) used by Sama (2023) are accepted as valid. Taxonomy of *Clytus rhamni* Germar, 1817 is discussed. *Parmena* (*Pilosoparmena* **subgen. nov.**), type species: *Parmena pudescens* (Dalman, 1817) is proposed. *Phytoecia* (*Danilevskia* Lazarev, 2024, type species *Saperda molybdaena* Dalman, 1817) [not *Danilevskia* Kuznetsov, 1970, type species *D. silvana* Kuznetsov, 1970, Lepidoptera] must be replaced by *Ph.* (*Danilevskovia* **nom. nov.**). New synonyms are proposed: *Tetrops praeustus praeustus* (Linnaeus, 1758) = *T. peterkai* Scořepa, 2020, **syn. nov.** = *T. praetermitus* Sláma, 2020, **syn. nov.**

1. According to Sama (2023: 53), *Polyarthron pectinicornе* (Fabricius, 1793) is “a single very variable species”. He did not show any infraspecific taxon of *P. pectinicornе* in the synopsis of the family (p. 21). Never the less the areas of 4 subspecies were illustrated by him in the map of North Africa (Fig. 175). Many subspecies were divided in smaller taxa, which cannot be accepted by modern Zoological Code (ICZN, 1999) as infrasubspecific. Now I try to save for nomenclature Sama’s taxonomy and propose to regard his subspecies names as the names of subspecies groups. So, the general system of the species must look as:

1. Group-*pectinicornе*

1. Subspecies: *P. p. pectinicornе* (Fabricius, 1793: 251) - the marginal west of the group area: Senegal.

2. Subspecies: *P. p. faurebigueti* Pic, 1898a: 165 - north-west of the group area - Mali (from Akjoujt, Tombouctou to Sokoto).

3. Subspecies: *P. p. gaillardi* (Lameere, 1912: 231)

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- marginal east of the group area - Niger, Chad (to Ennedi).

### 2. Group-jolyi

1. Subspecies: *P. p. jolyi* Pic, 1895: cclxxxv (= *filali* Kocher, 1956: 124) - north of the group area - Morocco, Alger (Tafilalet, Adrar, Ghardaia)

2. Subspecies: *P. p. lothei* (Villiers, 1946: 35) (= *saharensis* Pic, 1898b: 27) - south-east of the group area - Alger (In Salah, Ajjers)

3. Subspecies: *P. p. reymondi* Kocher, 1956: 124 - marginal west of the group area - Morocco (Dra).

### 3. Group-fairmairei

1. Subspecies: *P. p. fairmairei* Pic, 1893a: 110 (= *barbarum* Fairmaire & Coquerel, 1866: 67 [HN]) - north of group area - Alger, Libya (Ghadames, Touggourt, Biskra, Sousse)

2. Subspecies: *P. p. chatanayi* (Lameere, 1915: 59) - south of group area - Libya (Fezzan), Chad (Tibesti), Niger (Bilma)

### 4. Group-desvauxii

1. Subspecies: *P. p. desvauxii* Fairmaire, 1868: 499 (= *moissoni*, Pic, 1893b: cclx, = *pici* Lameere, 1912: 229, = *separatum* Pic, 1901: 15) - north of the species area - Alger (Aïn Sefra, Bou-Saada).

2. Several good series of *Clytus rhamni* Germar, 1817 from different countries are available at author's disposal: France, Italy, Albania, Greece, Bulgaria, Ukraine, Moldavia, Russia, Armenia, Azerbaijan, Georgia. Each series is characterized by high level of individual variability, but statistically several characters demonstrate good geographical peculiarities. Western population (France, Italy, Albania, Greece) mostly consists of specimens with all femora dark and light antenna. Such populations could be attributed to the nominative subspecies - *C. rhamni rhamni* Germar, 1817 described from Italy (= *bellieri* Gautier des Cottes, 1862 - Corsica). The most part of the species area (Bulgaria, Ukraine, Moldavia, Russia, Armenia, Azerbaijan, Georgia.) is represented by populations with red antennae, red anterior legs and partly darkened posterior femora, middle femora dark or light. All such populations can unite in a single subspecies - *C. rh. temesiensis* (Germar, 1824) (Transsylvania). Villiers (1978) wrongly described antennal color of *C. rh. rhamni* and *C. rh. temesiensis* as apically dark.

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3. *Rosalia syriaca* Pic, 1895 was restored by Özdikmen (2024) as “stat. nov”, though it was published by Pic (1900).

4. *Calchaenesthes* Kraatz, 1863 (type specis *Callidium oblongomaculatum* Guérin-Méneville, 1844) is accepted now as valid, but in fact it was a synonym of *Calchaenistes* Schaum, 1862: 102 (type species *Callidium nogeli* Frivaldszky von Frivald, 1845 - monotypy). So, the oldest name must be regarded as nomen oblitum.

5. *Dorcadion* (*Cribridorcadion*) *gashtarovi* Sama G., Dascalu M. & Pesarini C. 2010 is downgraded to subspecies rank: *Dorcadion* (*Cribridorcadion*) *catenatum gashtarovi* Sama, Dascălu & Pesarini, 2010, **stat. nov.**

6. *Dorcadion divisum* v. *thebesianum* Pic, 1942: 1 (“Thèbes” - Greece) recently published as *Dorcadion* (*Cribridorcadion*) *catenatum catenatum* Walzl, 1838 - [Turkey] (= *thebesianum* Pic, 1942) must be regarded as *Dorcadion* (*Cribridorcadion*) *catenatum thebesianum* Pic, 1942 **nom. rest.**

7. *Parmena* (*Pilosoparmena* **subgen. nov.**), type species: *Parmena pudescens* (Dalman, 1817). Prothorax and elytra with numerous erect setae. Elytra and prothorax in the nominative subgenus without long erect setae.

Etymology. The name *Pilosoparmena* (feminine) consists of Latin *pilosa* (hairy) and old genus name *Parmena*.

New subgenus includes 13 species:

*balearica balearica* Vives, 1998

*balearica minoricensis* Vives, 1998

*bicincta* Küster, 1849

*breuningii* Vives, 1979

*cruciata* Pic, 1912

= *schrammi* Pic, 1945

*lukati* Sama, 1994

*mutilloides* Sabbadini & Pesarini, 1992

*novaki* Sama, 1997

*pilosa pilosa* Brullé, 1832



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= *hirsuta* Küster, 1846  
*pilosa inclusa* Mulsant, 1862  
= *dahlia* Mulsant, 1862: 245  
*pubescens* Dalman, 1817  
= *algorica* Laporte, 1840  
= *minuta* Pic, 1891  
*slamai* Sama, 1986  
*soldatii* Cocquempot, 2020  
*solieri* Mulsant, 1839  
= *lanzai* Sama, 1985  
= *pilosa* Solier, 1835 [HN]  
*subpubescens* Hellrigl, 1971

*Parmena* (s. str.) includes 11 species:

*aurora* Danilevsky, 1980  
*balteus* Linnaeus, 1767: 1067 (*Cerambyx*)  
= *balteata* Fabricius, 1793: 262 (*Cerambyx*) – wrong subsequent spelling  
= *fasciata* Villers, 1789: 239 (*Cerambyx*)  
= *gauthieri* Stöcklein, 1940  
*batumiensis* Danilevsky, 2023  
*bialookii* Danilevsky, 2017  
*europaea* Danilevsky, 2017  
*istanbulensis* Danilevsky & Hizal, 2017  
*lodosi* Özdikmen & Tezcan, 2020  
*mergallii* Sama, 1984  
*pontocircassica* Danilevsky & Miroshnikov, 1985  
*striatopunctata* Sama, 1994  
[*samai* Özdikmen, 2021] - unavailable name  
[*sericata* Sama, 1996] - unavailable name  
*unifasciata* Rossi, 1790: 147 (*Lamia*)

8. *Phytoecia* (*Danilevskia* Lazarev, 2024, type species *Saperda molybdaena* Dalman, 1817) [not *Danilevskia* Kuznetsov, 1970, type species *D. silvana* Kuznetsov, 1970, Lepidoptera] must be replaced by *Ph.* (*Danilevskovia* **nom. nov.**).

9. *Tetrops praeustus praeustus* (Linnaeus, 1758) = *T. peterkai* Scořepa, 2020, **syn. nov.** = *T. praetermitus* Sláma, 2020, **syn. nov.**  
The morphological differences described by the authors of each name are completely insignificant.

10. A syntype of *Agapanthia verecunda* Chevrolat, 1882 was published by Kasatkin (2020) as “male, lectotype”, though the lectotype was never formally designated. So, the depicted male (“Syria, in montibus Drusarum. A.D. Coxe capta et data.”) from Muséum national d’Histoire naturelle (ex. collection C. Bowring-Chevrolat, Paris, France) is designated here as lectotype.

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*Received: 15.09.2024*

*Accepted: 25.10.2024*

## О ЖУРНАЛЕ

Гуманитарное пространство (Гуманитарное пространство. Международный альманах = Humanity space. International almanac) издается с 2012 года. Публикуются статьи, являющиеся результатом научных исследований. К печати принимаются оригинальные исследования, содержащие новые, ранее не публиковавшиеся результаты, обзоры, аналитические и концептуальные разработки по конкретным проблемам гуманитарных и естественных наук.

Издание зарегистрировано в Международном Центре ISSN в Париже (идентификационный номер печатной версии: ISSN 2226-0773).

Выходит 4 номера в год, а так же дополнения в виде приложения к журналу.

Альманах представлен во многих базах данных и каталогах: Zoological Record (Web of Science), ZooBank, EBSCO, ERIH PLUS, Index Copernicus International, Genamics JournalSeek, Google Scholar, Интеллектуальная система тематического исследования наукометрических данных (ИСТИНА), Российский индекс научного цитирования (РИНЦ), КиберЛенинка (Cyberleninka) и др.

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Publication is registered in the ISSN International Centre in Paris (identification number printed version: ISSN 2226-0773).

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